132-201

132-201

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1888.

No. ~~350.~~ 83

HERMAN ROYER, APPELLANT,

vs.

SOLOMON ROTH AND L. P. DEGEN.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF CALIFORNIA.

FILED SEPTEMBER 20, 1886.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1888.

No. 350.

HERMAN ROYER, APPELLANT,

vs.

SOLOMON ROTH AND L. P. DEGEN.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF CALIFORNIA.

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JUDD & DETWEILER, PRINTERS, WASHINGTON, SEPTEMBER 15, 1888.

1 *Bill of Complaint.*

To the honorable the justices of the circuit court of the United States for the ninth circuit, within and for the district of California, sitting in equity:

Herman Royer, a citizen and resident of the State of California, brings this his bill against Samuel Roth and L. P. Degen, also citizens and residents of the said State of California.

And thereupon your orator complains and says that heretofore, to wit, before the eighteenth day of January, in the year one thousand eight hundred and seventy-six, your orator, Herman Royer, was the original and first inventor of a certain new and useful invention in rawhide fulling machines.

That the same was a new and useful invention and consisted of combining with the drum of a rawhide fulling machine, operating to twist the hide alternately in one direction and then in the other, a shifting device for the purpose of making the operation automatic and continuous.

2 That the same was not known or used by others before your orator's said invention, and at the time of his application for a patent therefor had not been in public use or on sale for two years, nor abandoned, nor was it proved to have been abandoned.

That your orator, Herman Royer, being so as aforesaid the inventor thereof, on the eighteenth day of January, A. D. 1876, upon due application therefor, did obtain the letters patent of the United States for the said invention, granting and securing to him seventeen years from the last-named date the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention and improvement throughout the United States and the territories thereof.

Said letters patent were issued in due form of law, under the seal of the Patent Office of the United States, and were signed by the Secretary of the Interior and countersigned by the Commissioner of Patents of the United States and bore date the day and year last aforesaid, a description whereof and of said invention more

3 fully appears in said letters patent, which said letters patent are in due form of law and are ready in court to be produced by the plaintiff or a duly authenticated copy thereof.

And your orator says that he is still the owner and holder of said letters patent and of the rights, privileges, and liberties by them granted.

That prior to the issuing of said letters patent all proceedings were had and taken which were required by law to be had or taken previous to the issuance of letters patent granting special rights and liberties for new and useful inventions.

And your orator further shows unto your honors that always since the grant of the first said letters patent, in the exercise of the full and exclusive right and liberty so granted as aforesaid, your orator has made, constructed, and used the said improvement so

patented, and has [illegible] and maintained, until the infringement hereinafter complained of, possession of the said improvement and invention under and by virtue of said letters patent, and has never acquiesced in any invasion or infringement of his said rights.

4 And your orator further shows unto your honors that since your orator became the owner of said letters patent as aforesaid, and before the filing of this bill of complaint, the respondents herein, Samuel Roth and L. P. Degen, having full knowledge of the premises and in violation of your orator's exclusive right, liberty, and privilege as aforesaid, and utterly disregarding the same, and without the license of your orator or any license under said letters patent, and in the said district and State of California, have manufactured and used and still continue to use one or more rawhide fulling machines embracing the improvement and invention described in said letters patent and so secured to your orator. How many your orator is unable to say, but prays that the respondents may discover and set forth in their answer to this bill. And your orator alleges that the machines made and used by the respondents are infringements of said letters patent, and were made according to the invention therein described and thereby proctected and secured to your orator as aforesaid and contrary to law and the form of the

5 statutes of the United States in such cases made and provided.

And your orator shows that he is informed and believes, and so states to be true, that the respondents in this action intend to continue to infringe upon said letters patent, and to unlawfully use said invention as they have already been doing.

And your orator further shows unto your honors that he will be subject to great and irreparable injury unless he shall obtain from your honors the relief hereby sought.

To the end, therefore, that the said respondents may full, true, direct, and perfect answer make to all and singular the matters hereinbefore stated and charged as fully and particularly as if the same were hereinafter repeated and they thereunto distinctly interrogated, according to the best of their knowledge, information, and belief, and more especially that they may answer and set forth—

1st. Whether they have not before the filing of this bill, manufactured and used rawhide fulling machines with reversing attachments operating automatically, and how many, and how

6 the same are constructed.

Your orator hereby waives answers under oath to said interrogatories and each of them.

And that the said respondents may answer the premises, and they may be decreed to account for, and pay over to your orator all such gains and profits as have or might have accrued to them from using such improvements in rawhide fulling machines.

And your orator further prays this honorable court to assess or cause to be assessed the damages which he has sustained by reason of the premises and the infringements herein complained of, and that said damages when so assessed may be increased to an amount not exceeding three times the sum at which they shall be

assessed, and that the respondents, Samuel Roth and L. P. Degen, be adjudged and decreed to pay to your orator the damages so assessed, and also the amount to which they may be increased, in addition to the gains and profits above prayed for.

And your orator further prays that the respondents herein,
7 Samuel Roth and L. P. Degen, may be restrained by an injunction, issuing out of this honorable court, from making, using, or vending to others to be used, or transferring in any way any rawhide fulling machines embracing the improvements aforesaid so secured to your orator as aforesaid, and that the rawhide fulling machines so manufactured or purchased or in any manner obtained by them and now in possession of said respondents may be destroyed or delivered up to your orator, and for such other and further relief as the nature of the case may require and to your honors may seem meet.

May it please your honors to grant unto your orator, not only a writ of injunction, conformable to the prayer of this bill; but also the writ of subpœna, directed to the said Samuel Roth and L. P. Degen, commanding them to appear and answer this bill of complaint, and to do and receive what to your honors shall seem meet.

And your orator will ever pray, &c.

M. A. WHEATON,
Solicitor for Complainant.

M. A. WHEATON,
Of Counsel for Complainant.

8 STATE OF CALIFORNIA, } ss:
City and County of San Francisco, }

Herman Royer, being duly sworn, on his oath says that he is the complainant in the foregoing-entitled case; that he has heard the foregoing bill of complaint read and knows the contents thereof, and that the same is true of his own knowledge except as to the matters therein stated on information or belief, and as to those matters he believes it to be true.

H. ROYER.

Subscribed and sworn to before me this 10 day of March, A. D. 1885.

F. D. MONCTON,
Comm'r of U. S. Circuit Court, Dist of Cal.

(Endorsed:) Filed March 10, 1885. L. S. B. Sawyer, clerk.

9 *Subpœna.*

UNITED STATES OF AMERICA:

Circuit Court of the United States, Ninth Circuit, District of California. In Equity.

The President of the United States of America to Samuel Roth and L. P. Degan, Greeting:

You are hereby commanded that you be and appear in said cir-

cuit court of the United States aforesaid, at the court-room, in San Francisco, on the sixth day of April, A. D. 1885, to answer a bill of complaint exhibited against you in said court by Herman Royer, who is a citizen of the State of California, and to do and receive what the said court shall have considered in that behalf, and this you are not to omit under the penalty of five thousand dollars.

Witness the Honorable Morrison R. Waite, Chief Justice
10 of the Supreme Court of the United States, this 10th day of March, in the year of our Lord one thousand eight hundred and eighty-five, and of our Independence the 109th.

[SEAL.] L. S. B. SAWYER, *Clerk.*

Memorandum Pursuant to Rule 12, *Supreme Court U. S.*

You are hereby required to enter your appearance in the above suit on or before the first Monday of April next, at the clerk's office of said court, pursuant to said bill; otherwise the said bill will be taken *pro confesso.*

L. B. S. SAWYER, *Clerk.*

UNITED STATES MARSHAL'S OFFICE,
DISTRICT OF CALIFORNIA.

I hereby certify that I received the within writ on the 11th day of March, 1885, and personally served the same on the 12th day of March, 1885, by delivering to and leaving with Samuel
11 Roth and L. P. Dreger, said defendants named therein, personally, at the city & county of San Francisco, in said district, a certified copy thereof.

San Francisco, March 12th, 1885.

M. M. DREW,
U. S. Marshal,
By B. J. AKERMAN, *Deputy.*

(Endorsed:) Filed March 12, 1885. L. S. B. Sawyer, by F. D. Moncton, deputy clerk.

12 *Answer of Defendant L. P. Degen.*

In the Circuit Court of the United States within and for the District of California, in the Ninth District.

HERMAN ROYER
vs.
SAMUEL ROTH and L. P. DEGEN. } No. 3631.

The answer of L. P. Degen, one of the defendants, for himself and not for his codefendant, saving and reserving to himself all and all manner of benefit and advantage of exception whatever which can or may be had or taken to the errors, uncertainties, imperfections, and insufficiencies in the bill of complaint filed herein contained, for answer thereto, — unto so much and such parts thereof as this defendant is advised it is material or necessary for him to make answer unto, answering, says:

He denies upon information and belief that the plaintiff in the bill of complaint was at the time mentioned in the bill of complaint herein, or at any other time, the original or first inventor or
13 any inventor of the shifting device for the purpose of making the operation of rawhide fulling machines automatic and continuous, described in the bill of complaint herein.

He denies upon information and belief that the said improvement in rawhide fulling machines described in said bill of complaint was or is a new or useful invention; and he denies that the same was not known or used by others before the alleged invention of the plaintiff, or that at the time of said plaintiff's alleged application for a patent therefor it had not been in public use or on sale for two years, or abandoned.

And said defendant, further answering, avers that he has not sufficient knowledge as to whether all proceedings were had or taken which were required by law to be had or taken previous to the issuance of said letters patent to enable him to answer thereto, and said defendant, on information and belief, says that said patent ought not to have been granted or issued.

And said defendant, further answering, denies that at the
14 time or place alleged in said bill of complaint, or at any other time or place, or at all, he has manufactured or used or caused to be manufactured or used rawhide fulling machines embracing the improvement or invention described in the bill of complaint herein or made according to said alleged invention.

And said defendant, further answering, denies that he has in any manner or thing infringed upon the rights or right secured or alleged to be secured by the letters patent referred to in said bill of complaint, and he disclaims any intention to infringe upon said letters patent or upon any patent thereof, or to unlawfully manufacture, use, or sell any invention secured or attempted to be secured thereby.

And, further answering upon information and belief, this defendant says that the said plaintiff was not, either at the time when his application for said letters patent was made or at any other time, the original or first inventor or discoverer of the pretended in-
15 vention or discovery in said letters patent claimed or described or of any material or substantial part thereof.

Further answering, this defendant avers upon information and belief that the said pretended invention described in said bill of complaint was by the said plaintiff, Herman Royer, publicly used at the city and county of San Francisco, State of California, and elsewhere for more than two years before the application of said Herman Royer for letters patent thereof, as will appear from the testimony of Louis Royer, a brother of plaintiff, now residing in England, but at what part of England this defendant does not know.

Further answering, and in support of his allegation that the letters patent described in the bill of complaint are void for want of novelty, this defendant avers upon information and belief that long anterior to the date of the pretended invention by plaintiff de-

scribed in said bill of complaint the same was in use at the Cosmopolitan Hotel, at the Occidental Hotel, at St. Mary's Hos-
16 pital, at the Magdalen Asylum, at Saint Mary's College, all in the city and county of San Francisco, State of California, as will appear by the testimony of Peter F. Clerc, William H. Birch, William Powelson, and P. Lambert, all residents of said city and county of San Francisco.

Also the same was made and sold by the City Iron Works at the northeast corner of Mission and Fremont streets, in said city, as will appear from the testimony of said Peter F. Clerc and R. Chartrey, the latter residing at Alameda, State of California.

Further answering, this defendant avers upon information and belief that the said Herman Royer was not the inventor of any portion or part of the improvement described in said bill of complaint, but that a machine exactly like that described and shown in the letters patent described in bill of complaint was built by the said Peter F. Clerc for the said Herman Royer, without any suggestion whatever as to its construction from said Royer, long anterior to two years before the filing of said Royer's application for a patent,
17 and that if there be any invention in said improvement said Clerc was the inventor thereof, and were by him communicated to said Royer as aforesaid.

Further answering, this defendant avers upon information and belief that long prior to said alleged invention of plaintiff substantial and material parts of said improvement were shown in a certain printed publication, styled "507 Mechanical Movements," edited by H. F. Brown, and published at New York city in the year 1868, and at page 8, figure 7, and page 9, paragraph 7 thereof; and in certain letters patent of the United States as follows, to wit: H. & L. Royer, machine for treating rawhide, dated May 12, 1868, No. 77920; H. Royer, device for treating rawhide, dated June 22, 1869, and now numbered 91772.

Further answering, this defendant avers that long anterior to the date of the alleged invention of said Royer the improvements described and shown in said letters patent were substantially described in certain printed publications, to wit:

18 In a book entitled "Arts of Tanning, Currying, and Leather Dressing," by H. Dussance, second edition thereof, published at Philadelphia, Penn., by Henry Casey Baird in the year 1867, and at pages 217 to 220, inclusive; also in vol. 56, page 40, and plate 4 of French Reports of Expired Patents; also in a book entitled "Encyclopedia of Machine and Hand Tools," edited by W. J. M. Rankin, published at London, England, by William McKenzie, in the year 1869, at plate $\frac{4}{10}$ and $\frac{1}{5}$, and the text immediately following the same; also in certain letters patent of Great Britain, granted Joseph Whitworth October 5, 1837, numbered 7441

Further answering, this defendant avers upon information and belief that long anterior to the alleged invention of said Royer a machine embodying substantially the same device as is claimed in the letters patent described in the bill of complaint herein was in public use at the Staats Zeitung newspaper office in the city of Chi-

cago, State of Illinois, as will be shown by the testimony of C. Frouthe Putsche, George Schwaab, William Severin, and Philip Frouth, all residents of said city of Chicago.

19 All of which matters and things this defendant is ready and willing to aver, maintain, and prove as this honorable court shall direct, and he prays to be hence dismissed with his costs and charges in this behalf sustained.

J. F. COWDERY,
Solicitor & Counsel for Defendant L. P. Degen.

UNITED STATES OF AMERICA.

STATE OF CALIFORNIA, }
City & County of San Francisco, } *ss:*

On this 20th day of May, A. D. 1885, personally appeared L. P. Degen, the defendant named in the foregoing answer and who signed the same, and he, having been duly sworn, did depose and say that he had heard the foregoing answer read and knows the contents thereof; that the same is true of his own knowledge except as to the matters therein stated upon information and belief, and that as to those matters he believes it to be true.

L. P. DEGEN.

Subscribed and sworn to before me this 20 day of May, 1885.
F. D. MONCTON,
U. S. Commissioner Circuit Court, Dist. of Cal.

(Endorsed:) Filed May 21st, 1885. L. S. B. Sawyer, clerk, by F. D. Moncton, deputy clerk.

20 *Answer of Respondent, S. Roth.*

Circuit Court of the United States in and for the District of California.

HERMAN ROYER, Complainant,
vs.
SOLOMON ROTH and L. P. DEGEN, Respondents. } No. 3631.

The answer of the respondent, S. Roth, to the bill of complaint of Herman Royer, complainant.

This respondent, Solomon Roth, named and served herein as Samuel, but whose true name is Solomon, saving to himself all manner of benefit of exception to the many errors and imperfections in said bill of complaint contained, for his separate answer thereto, or to so much thereof as he is advised is material to be by him answered, denies that the said Herman Royer, before the 18th day of January, 1876, or at any other time, was the original or first inventor of the shifting device or alleged invention or any part or parcel thereof described in the letters patent named in said bill of complaint; denies that the same was not known or used by others before said Royer's application for a patent therefor; denies that it

had not been in public use for more than two years prior to his, Royer's, application for a patent; denies that said Royer has
21 ever had the exclusive use of said alleged invention; admits that this respondent has caused to be made a machine containing an automatic shifting device substantially the same as that described in said letters patent, and avers that such device was made exactly as were others made and used at least ten years before the application of said Royer for said letters patent; denies that said Roth ever has infringed or intends to infringe upon any invention lawfully secured to said complainant.

Further answering, said respondent avers that in the year 1865 a machine containing the same shifting device described as an invention in said letters patent, and identically as described in the specifications attached thereto, was erected and used in the Cosmopolitan Hotel, in the city and county of San Francisco, in the State of California, and there used for many years thereafter, and seen there in use by Peter Lambert and Peter F. Clerc, now residing in said city and county; that many washing machines containing identically the same shifting device described in said letters patent were made and
22 erected and operated by said Clerc—one in the Occidental Hotel, in said city of San Francisco, in the year 1869 or 1870, which is still in use; one in St. Mary's Hospital, at Second and Bryant streets, in said city, in the year 1865, and used continuously there until the year 1880; and many more machines containing said device were made by said Clerc in each year from 1863 to 1870, in said city, at his shop, Nos. 26 to 28 Fremont street.

That said Royer never conceived or invented any part of the said "improvement in machines for treating rawhide" described in said letters patent, but in the year 1867, at least nine years before he conceived the idea of applying for a patent for said device, he applied to the said Peter F. Clerc, in the city and county of San Francisco, to make him an automatic reverser and to attach the same to a rawhide fulling machine or twisting machine then used by him, said Royer, such as is referred to in the specifications of said letters patent named in his bill of complaint herein; and thereupon the said Clerc, without any advice or assistance or
23 suggestion or direction from said Royer, either as to form, mode of operation, or manner of making, except to learn from said Royer how many times he wished the machine to revolve before reversing, made and constructed the identical device now claimed in said letters patent, and attached the same to the fulling or twisting machine for said Royer; and said Clerc made such shifting device in every particular exactly similar to that described in said letters patent, and placed it in operation in said Royer's shop, in said city and county of San Francisco, where it was used for many years by said Royer, until in the year 1875, he, said Royer, made application for letters patent upon said machine, no part of which he had ever conceived or invented, and thereafter obtained said letters patent for the same.

Respondent prays that he may be hence dismissed with his costs in this behalf most wrongfully sustained.

MANUEL EYRE,
Solicitor for said Roth.

STATE OF CALIFORNIA, }
City and County of San Francisco, } *ss:*

24 Solomon Roth, being duly sworn, says that he is the Roth named as respondent in the above-entitled suit and served and named therein as Samuel, but whose true name is Solomon; that he has read the foregoing answer and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated on his information and belief, and as to those matters that he believes it to be true.

SOLOMON ROTH.

Subscribed and sworn to before me this 25th day of May, 1885.
[NOTARIAL SEAL.] L. MEININGER,
Notary Public.

(Endorsed:) Filed May 29, 1885. L. S. D. Sawyer, clerk.

25 *The Replication of Complainant to the Answer of L. P. Degen, Defendant.*

Circuit Court of the United States for the District of California, Ninth Judicial Circuit.

HERMAN ROYER, Complainant,
vs.
SAMUEL ROTH *et al.*, Defendants.

Replication to answer.

This repliant, saving and reserving to himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer of said Degen, for replication thereto saith that he will aver, maintain, and prove said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the defendant Degen is uncertain, untrue, and insufficient to be replied unto by this repliant; that any other matter or thing whatsoever in the said answer of said Degen contained, material or effectual in the law to be replied unto and not herein and
26 hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true.

All of which matters and things this repliant is now and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly pray- as in and by his said bill he has already prayed.

M. A. WHEATON,
Solicitor for Complainant.

Received copy of within replication this the 1st day of June, 1885.

COWDEREY & McCUTCHEN,
Per E. R.,
Attorney for Defendant, L. P. Degen.

(Endorsed:) Filed June 1st, 1885. L. P. B. Sawyer, clerk, by F. D. Moncton, deputy clerk.

27 *Replication to Answer.*

Circuit Court of the United States for the District of California, Ninth Judicial Circuit.

HERMAN ROYER, Complainant,
vs.
SOLOMON ROTH *et al.*, Defendants.

The replication of complainant to the answer of Solomon Roth, defendant.

This repliant, serving and reserving to himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer of said Roth, for replication thereunto saith that he will aver, maintain, and prove said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the defendant, S. Roth, is uncertain, untrue, and insufficient to be replied unto by this repliant; that any other matter or thing whatsoever in the said answer of said Roth contained material or effectual in the law to be replied to and not herein and hereby well and
28 sufficiently replied unto, confessed and avoided, traversed or denied, is true.

All of which matters and things this repliant is now and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly pray as in and by his said bill he has already prayed.

M. A. WHEATON,
Solicitor for Complainant.

Received copy of within replication this the 1st day of June, 1885.

MANUEL EYRE,
Attorney for Def't Roth.

(Endorsed:) Filed June 1, 1885. L. S. B. Sawyer, clerk, by F. D. Moncton, deputy clerk.

29 *Enrollment.*

In the Circuit Court of the United States, Ninth Circuit, District of California.

HERMAN ROYER, Complainant,
vs.
SOLOMON ROTH *et al.*, Respondents. } No. 3631.

The complainant filed his bill of complaint herein on the 10th day of March, 1885, which is hereto annexed. A subpœna to appear and answer in said cause was thereupon issued, returnable on the sixth day of April, A. D. 1885, which is hereto annexed.

The respondents appeared herein on the 6th day of April, 1885, by I. F. Cowderey and Manuel Eyre, Esq-., their solicitors.

On the 21st day of May, 1885, the answer of L. P. Degan was filed herein, which is hereto annexed.

On the 29th day of May, 1885, the answer of Solomon Roth was filed herein, which is hereto annexed.

Replications to said answers were filed herein June 1st, 1885, which replications are hereto annexed.

Thereafter a final decree was filed and entered herein in the words and figures following, to wit:

Final Decree.

In the United States Circuit Court, District of California.

HERMAN ROYER, Complainant,
vs.
SOLOMON ROTH & L. P. DEGEN, Defendants. } No. 3631.

30 This cause having come on to be heard upon the bill of complaint herein, the answer of the defendants, the replication thereto, and all the evidence and proof taken and filed in the cause, and having been argued by counsel for the respective parties—

Now, therefore, on consideration thereof, the court finds, adjudges, and decrees as follows:

That the letters patent mentioned in the bill of complaint (the same being United States letters patent number 172,346, bearing date January 18th, 1876, and granted to Herman Royer for an improvement in machines for treating rawhide) was duly granted by the Government of the United States to the complainant, as alleged in said bill, and the complainant ever since has been and still is the owner of the said letters patent.

That the defendants infringed said letters patent, as alleged in said bill of complaint.

That the complainant, Herman Royer, first conceived of the combination of an automatic reverser attached to the drum of a
31 rawhide fulling machine operating to twist the leather in one direction, and the other for the purpose of making the operation automatic and continuous, as described and claimed in said letters patent.

That, at the request of said Royer, one Clerc, a mechanic, made the automatic reverser described in said letters patent, and in October, 1867, delivered the same to said Royer, who attached it to his said fulling machine.

That the said combination was new with the said Herman Royer and was useful, and that his use thereof was secret until he made application for the said letters patent.

The court further finds that it was not obvious and was not known whether the new combination could be used successfully for the practical treatment of rawhide, which was the work for which the combined machine was intended, until after it had been tested and tried by the said Herman Royer.

The court finds that it was obvious to any skilled mechanic that an automatic reverser could be applied to the drum of a raw-
32 hide fulling machine so as to make it reverse its motion automatically at any desired fixed intervals.

The court therefore finds that the said letters patent does not cover any patentable invention, and for this reason alone it is ordered and decreed that the complainant's bill of complaint be, and the same hereby is, dismissed.

GEO. M. SABIN, *Judge.*

(Endorsed:) Filed & entered May 27, 1886. L. S. D. Sawyer, clerk.

33 *Mem. of Costs and Disbursements.*

Circuit Court of the United States, District of California.

HERMAN ROYER, Complainant,
vs.
SOLOMON ROTH *et al.*, Respondents. } No. 3631.

Respondents' Cost Bill.

Clerk's fees	$10 00
Notary fees, ver. of answer and to cost bill	1 00
Oct. 16th, service of subpœna, 2	1 50
" 21st, wit's' fees, Clerc & Lambel, and mileage	3 20
Examiner's fees	10 00
Docket fee of attorney	20 00
" " " depositions of Roth, Clerc, & Lambel	7 50
Taxed at	$53 20

L. S. B. SAWYER, *Clerk,*
By F. D. MONCTON,
Deputy Clerk.

STATE OF CALIFORNIA,
City and County of San Francisco, } *ss:*

Geo. H. Baker, being duly sworn, says that he is clerk to Manuel Eyre, Esq., solicitor for respondent Roth; that as such he is cogni-

zant of the costs and disbursements above named, and that the same were actually incurred.

GEO. H. BAHORS.

34 Subscribed and sworn to before me this 13th day of May, 1886.

[NOTARIAL SEAL.] L. MEININGER,
Notary Public.

To William A. Wheaton, Esq., solicitor for complainant:

Please take notice that on Saturday, the 15th day of May, 1886, at 10 o'clock a. m., I will apply to the clerk of said court to have the foregoing memorandum of costs and disbursements taxed, pursuant to the rule of said court in such cases made and provided.

MANUEL EYRE,
Solicitor for Defendant Roth.

Service of and receipt of a copy of the foregoing cost bill and notice admitted this 13th day of May, 1886.

M. A. WHEATON,
Per HARPKUN,
Solicitor for Complainant.

(Endorsed:) Filed May 13, 1886. L. S. B. Sawyer, clerk, by F. D. Moncton, deputy clerk.

35 *Clerk's Certificate. Enrolled Papers.*

Thereupon said pleadings, subpœna, final decree, and a memorandum of taxed co-ts are hereto annexed, said final decree being duly signed, filed, and enrolled, pursuant to the practice of said circuit court.

Attest, *ect.*:

[SEAL.] L. S. B. SAWYER, *Clerk*,
F. D. MONCTON,
Deputy Clerk.

(Endorsed:) Enrolled papers. Filed May 27, 1886. L. S. B. Sawyer, clerk, by F. D. Monckton, deputy clerk.

36 *Stipulation.*

United States Circuit Court, District of California.

HERMAN ROYER
vs.
SAMUEL ROTH and L. P. DEGEN. } No. 3631.

It is stipulated and agreed that the respondent, S. Roth, have twenty days from and after Monday, May 4, 1885, in which to serve and file his answsr to the bill of complaint herein.

San Francisco, Cal., April 27th, 1885.

M. A. WHEATON,
Solicitor for Complainant.

It is further stipulated that said respondent Roth may file a general denial as his answer, and may, without notice, submit testimony as to prior use and anticipation, and testimony that the complainant was not the orignal or first inventor of the device described in his bill of complaint, without setting out or alleging such matters in his, said Roth's, answer, and upon such terms as to the intro-
37 duction of such proofs as may be hereafter agreed on by said parties and their solicitors.

M. A. WHEATON,
Solicitor for Complainant.
MANUEL EYRE,
Solicitor for said Roth.

(Endorsed:) Filed April 28th, 1885. I. S. B. Sawyer, clerk, by F. D. Moncton, deputy clerk.

38 *Caption to Depositions.*

In the Circuit Court of the United States for the Ninth Circuit and District of California.

HERMAN ROYER
vs.
SOLOMON ROTH & L. P. DEGEN. } 3631.

Be it remembered that on the 21st day of October, 1885, at my office, in the city and county of San Francisco, State of California, before me, S. C. Houghton, examiner in chancery of the circuit court of the United States for the ninth circuit and district of California, personally appeared the several witnesses whose names are hereinafter set forth, and were examined on behalf of the respective parties to the above-entitled suit. M. A. Wheaton, Esquire, appeared as counsel for complainant. Manuel Eyre, Esquire, appeared as counsel for respondent Roth. Following is a record of the proceedings:

Testimony.

WEDNESDAY, *Oct.* 21*st*, 1885.

Present: Mr. Wheaton, counsel for complainant; Mr. Eyre, counsel for respondent Roth.

39 Complainant introduces in evidence United States letters patent No. 172,346, granted January 18, 1876, to Herman Royer for improvement in machines for treating rawhides.

By agreement of counsel a Patent Office copy of the specifications and drawings of said patent are used in evidence and the original to be withdrawn. Said Patent Office copy is marked "Complainant's Exhibit A."

Complainant rests.

Testimony of Peter Lambert.

Examination-in-chief of PETER LAMBERT on behalf of respondent:

In response to questions of Mr. EYRE the witness testified as follows:

My name is Peter Lambert; my age is forty-seven years; I live in San Francisco, and I am an engineer at the Lick House. I have been an engineer in San Francisco since 1862. In 1864 I worked at the Cosmopolitan Hotel.

I understand the automatic reverser shown in the patent, Exhibit A. When I was engineer at the Cosmopolitan Hotel, in San
40 Francisco, in 1864, they used a washing machine there with an automatic reverser. I don't see no difference between that machine then used at that place and the automatic reverser shown in the patent, Exhibit A. It is just the same.

Cross-examination:

In response to questions of Mr. WHEATON the witness further testified on cross-examination as follows:

The machine that they had at the Cosmopolitan Hotel goes just as many times as they wanted it to in one direction before it reversed and went in the other direction—one, two, three, four, six, eight, ten—any number of times that they wanted; it usually went seven to eight; it was possible for it to go seven or eight times in one direction before it reversed; it went seven or eight times one way, and then reversed and went seven or eight times the other. I can't say how many times the machine described in the patent turns in one direction before it reverses, because I never worked that machine. The reverser was the same in both machines referred to. I don't know how many times they set the machine described
41 in the patent to run in one direction before they would reverse it to run in the other; there was nothing in the center of the washing machine used at the Cosmopolitan Hotel; that was a vacant space where they put the linen in. There was two gearings in each end of the washing machine, or one, but there was generally two. Then there was a screw in the back, attached to the large gearings and to the small gearings. The small gearing was attached to pulleys and cog-wheels—three cog-wheels, I believe, or four; I don't exactly recollect now—and then a screw was attached to those two small gearings on each end of the shaft; that screw changed a lever like that shown in the patent drawing. When that lever passed a perpendicular it dropped on one side and shifted at the belt. There is no gearing attached to the reversing screw in the machine shown in the patent. There is nothing attached to it excepting the bar P, connecting with the lever.

I have read the patent, Exhibit A. I don't understand it. I don't know anything about the machine that was used for treating
42 rawhide, with which the reverser was combined, as shown in the patent. I don't know whether there were any difficulties

to overcome in making a reverser operate automatically with the rawhide machine, which difficulties did not exist in making a reverser operate automatically in a washing machine.

I could know, after I had seen the reverser operate with a washing machine, whether the same reverser could be made to operate with a rawhide machine or not, but I don't know it. It could be made to operate with anything that you wished to reverse. I don't know how the machine described in the patent was made. If in operating a rawhide machine and reversing it by hand it was found that at times the hides would catch in it and twist around so that unless it was instantly stopped before it had revolved as many as seven or eight or any other regular number of times the hide would be spoiled, that is a matter I don't know anything about. As to whether in such a case an automatic reverser could be used with the machine, a practical man would be able to use it
43 because he could set it just as he wanted it to reverse. I know nothing at all about the difficulties to be overcome in operating the rawhide machine. I never saw it.

In response to questions of Mr. EYRE the witness testified as follows:

I understand the gearing part of the machine shown in the drawing, Exhibit A, and not the other.

By the gearing part I mean the automatic reverser. I mean that I don't understand the rawhide machine itself, but I do understand all about the reverser shown in the patent Exhibit A.

Testimony of Peter Frederick Clerc.

Examination-in-chief of PETER FREDERICK CLERC on behalf of respondent-:

In response to questions of Mr. EYRE the witness testified as follows:

My name is Peter Frederick Clerc; my age is fifty-eight years; my place of residence is San Francisco, and I am by occupation a machinist. I have made washing machines with an automatic shifting device. The time when I first began to make them
44 was, I think, in 1862 or 1864. Referring to the patent, Exhibit A, I understand the drawing of the shifting device shown and described in that patent.

Q. How does that compare with the shifting device made by you and used on your washing machines?

A. All the shifting machines is exactly the same principle.

(Complainant objects to and moves to strike out the answer on the ground that it is not the province of the witness to state the principles of the machines, but to describe what they are and how they operate, leaving it for the court to determine whether or not they are operated upon the same principle.)

The WITNESS: The one that I used on the washing machines, the screw shaft, is driven by two gears, one on each end of the screw shaft. The difference between that and this one de-

scribed in the patent is, this in the patent is driven by a belt. I have some reversers made in different places that are made to drive with a belt, too; I have some; I made some; I made some about twelve years ago.

Mr. WHEATON: We object to all testimony with regard to
45 the use of a reverser in connection with anything else than a rawhide machine, since the patent does not cover the invention of the reverser by itself or the combination of the reverser with anything else than a rawhide machine.

The WITNESS: I think it was about 1864 that I first made a washing machine with an automatic reverser similar to that shown in the patent, Exhibit A—between 1864 and 1862. The first one was put up at the City laundry in San Francisco. That was on the block between Third and Fourth, Brannan and Townsend streets. I think the next one that I put up was at the Cosmopolitan Hotel or at St. Mary's Hospital or College—Santa Clara College. I made at that time a good many. I made two, I think, for the Chelsea laundry. I built one or two for the Russ House, and I built two or three for the Occidental Hotel; two for the Grand laundry; two or three, maybe six, for the San Francisco laundry; one for the German Hospital, two for the Occidental Hotel, and since that I built a great many others. I have continued to build them till
46 to-day, excepting six or eight months that I was in Mexico.

I understand the shifting device described in the patent, Exhibit A. The difference between that shifting device and those that I used on my washing machines is that this described in the patent is driven by a belt and the one I generally use is driven by the gearing on this screw shaft. Some of mine have been driven by belts in different places. There is one at the San Francisco laundry and one at the Grand laundry now that are driven by pulleys. The one was made at the San Francisco laundry about maybe ten years ago, and the one at the Grand laundry two years ago. I can find the exact date when that at the San Francisco laundry was made.

I know the complainant, Mr. Royer; I made an automatic shifting device for him; that was between 1869 and 1866. I do not remember the date when the entry of the payment of that appears in my book. I know that Mr. Royer paid me one hundred and eighteen dollars for the job I did for him. I have the book at my house which will show the date. After that I had a good
47 deal of work for Mr. Royer. All I could find on my book was that Mr. Royer paid me so much money, and the book does not show that it was this work for making a shifting device.

I did work for him after I made the shifting device.

I am sure that it was between 1866 and 1869 that I made this shifting device for him. At that time, when Mr. Royer came to me, I was one of the owners of the City Iron Works. He came to me one day when I was in my office, and said he wanted to talk to me. He asked me if I built some reversers. I said "Yes, I do." He said to me—I think it was after a few words that we had together—that

he was sent to me by Billy Birch; that Birch told him I had a very good thing for the reverser. He asked me if I could do it. I said, "Yes." He asked me different questions, where I had used it, and then asked me if I could make a reverser for other machines. I said, "Yes, I can; if you will give me a drawing of your machine I will do it." Then he made a drawing of a machine, that
48 leather machine, and he brought it to me, and I think I showed him some of my washing-machine drawings, and he looked at it and asked me if I thought that the reverser could be made to work upright instead of horizontal; if the machine was upright instead of horizontal, if I could make it go. I said, "Yes, certainly." The washing machine was horizontal and his machine was upright.

I said, "All I have got to do is to put some bevelled gear in instead of straight gear." He asked me if I was positively sure to do it. I said, "Yes; I am positively sure that that will work." So he gave me the order for the job and I made the reverser. We didn't agree about no price; he didn't ask me nothing at all about that. He told me to do it. since I was certain I could do it. He gave me the size and everything of his machine and I made a reverser for his machine.

He didn't make any suggestion to me how to make it. I only asked him how many times he wanted it to turn before it reversed. He didn't give me no suggestion on the reverser. He only
49 answered to the questions I asked him about the machine, and he told me what the machine was. I can't tell whether or not I put the reverser on the machine myself. I can't remember. Whether I took it down to Mr. Boyer's shop or not is more than I can tell.

The shifting device shown in the patent, Exhibit A, is the shifter I built for Mr. Royer; that is exactly the shifter. It is exactly the same. It is beveled gear that is on the reverser shown in the drawing of the patent, and on the washing machine it was spur gear. A horizontal machine requires a spur gear and the upright one takes a beveled gear. Any mechanic can change from beveled to spur gear; that is well known.

Cross-examination of PETER FREDERICK CLERC:

In response to questions of Mr. WHEATON the witness further testified on cross-examination as follows:

I don't know who first suggested the idea of combining a
50 reversing machine with the rawhide machine. Mr. Royer came to me and asked me if I could build a reverser. I said, "Yes." He told me that it was for a leather machine—a rawhide machine. It was Mr. Royer and not I who first suggested combining an automatic reverser with that rawhide machine. So far as I know Mr. Royer first actually made that combination—put the two together. I don't know anything about the difficulties that existed at that time in operating that rawhide machine when it was reversed by hand. As to the hides doubling and catching so that

they would heat and spoil unless the machine was stopped before it went as many times in one direction as it ought to go in order to properly treat the hides, I couldn't tell anything about that. After he gave me the order to build the reverser he took me to his shop and he showed me how his rawhide machine worked. He showed me different things—difficulties and so on—and that is all I knew about it. I never saw it before. Mr. Royer is the first man I ever knew who tested and tried the combination of an automatic reverser with that rawhide machine. So far as I know, he was
51 the first.

In response to questions of Mr. EYRE the witness further testified as follows:

I had some conversation with Mr. Royer as to whether this automatic reverser would work when attached to his rawhide machine, before I made it. I told him I was positively sure it would work on his rawhide machine. He didn't ask me to guarantee it, but I told him I was positively sure it would work. I told him, "I am positively sure it will work." I never heard any complaints about it after I made it.

In response to questions of Mr. WHEATON the witness further testified as follows:

When I say I knew it would work I mean that I knew it would reverse whenever the machine had turned just so many times in one direction. For all I know, if the machine turned a certain number of times in one direction, and this automatic reverser was attached to it so that it could not be stopped, the hides in that machine might be twisted and spoiled. I don't know whether or not this
52 machine would work well or not if this automatic reverser was attached to it. I couldn't say whether it would work at that time; but I was aware that the machine would reverse exactly as it was set the number of times that it was set for; that it would go that number of times to a quarter of a turn. I knew positively that the reverser would do its work. Whether the machine with the reverser attached would do good work in treating hides or not I don't know. I didn't know anything about rawhide or leather—nothing at all.

Examination-in-chief of SOLOMON ROTH on behalf of respondent:

In response to questions of Mr. EYRE the witness testified as follows:

I am one of the respondents in this case. I first went to work for Mr. Royer in March, 1874. Mr. Royer then had that automatic reversing machine shown in the patent, Exhibit A, attached to his rawhide machine, when I went to work for him in 1874.

53 (In the case of Louis Royer and Herman Royer *vs.* L. P. Degen and Solomon Roth, No. 3628, in this court, the witness, Solomon Roth, deposed as hereinafter set forth, and, by stipu-

lation and agreement of counsel for the respective parties to this suit, such deposition of said witness is inserted herein, to be used in all respects as if the same had been originally introduced in this cause.)

The WITNESS: I caused to be made a machine with a vertical shaft, similar to the shaft marked B, shown in the drawings and described in the specifications of letters patent No. 77920, granted May 12, 1868, to Herman Royer and Louis Royer for improved machine for treating hides. In that machine I didn't use the bars marked C C C. That machine was made by Clot & Meese on Fremont street, in this city, in October, 1884. I received the machine from them between the 15th and 28th of October, 1884. I never used that machine for myself. I took the machine away. It was placed in Mr. L. P. Degen's shop. I worked hides on it for Mr. Degen as his employé. I can't just tell exactly how many hides I worked upon it, but as far as I could tell it was one hundred
54 and seventy or one hundred and seventy-three; maybe it was a few more, but it was not less. Those were worked by me as employé of Mr. Degen. He didn't pay me anything for the use of the machine. When this suit was begun I stopped working for Mr. Degen, under the advice of Mr. Eyre, and took this upright shaft out of the machine and destroyed the machine so that it could not be worked. I never have worked this machine since this suit was commenced. I never have worked it at any time for my own benefit, or rented it to anybody.

Cross-examination of SOLOMON ROTH:

In response to questions of Mr. WHEATON the witness further testified on cross-examination as follows:

The machine that I made did not contain the bars C C C. I had a cylindrical case to take the place of those bars. In operating that machine I attached one edge of the hides to the central shaft that revolves. When that central shaft revolved it wound the hides around it and inside of the case. When the hides were
55 wound around the shaft and inside the case they were compact, tight together. After they were wound around the shaft in one direction the shaft reversed and wound them around it in the opposite direction. In that respect it worked the same as Mr. Royer's machine worked. The machine reversed automatically. My machine was a vertical machine. I had a weight pressing upon the hides edgeways from the top down.

The mechanical motion of that machine would heat or warm the hides while they were being operated in it. I can't tell how warm the hides would become in the machine. I don't know how many degrees of heat. The hides were heated different than in Mr. Royer's machine. The machine operated quicker and the hides were heated quicker. I can't tell whether they got about as warm in my machine as in Mr. Royer's machine. I don't know whether the degree of heat that the hides attained was different in the two machines.

The hides got warm in both machines. In my machine, in the

revolving shaft in the center, I attached the hides in the ma-
56 chine in a slot like that marked B in the drawing of the patent last referred to. The hides are fastened there with set screws. I had an agreement with Mr. Degen, under which I worked these hides in this machine, that he would give me three dollars a day for my work, and he would not pay for the machine if the machine would not work, but if it worked all right he agreed to pay me for the machine and keep me at work; and if it didn't work all right he was not to employ me any longer. I received nothing for the work done by the machine. I had the machine made by Clot & Meese, and paid for it myself. I stopped working that machine on account of the bringing of these suits. I stopped working it under the advice of my counsel.

The hides that I worked in the machine were Mr. Degen's hides. I bought the hides and he paid for them. I had no interest in the hides. I was in his employ and bought the hides and he paid for them. I went and bought them in his name and he paid for them.

Respondent Roth rests.

57 (Examination continued by agreement of counsel to October 30th, 1885, at half past ten o'clock a. m.)

FRIDAY, *October* 30, 1885.

Present: Mr. Wheaton, of counsel for complainant; Mr. Cowderey, of counsel for respondent Degen.

(Complainant introduces in evidence an extract from the deposition of Herman Royer given in the case of Herman Royer *vs.* William Coupe *et al.*, in the United States circuit court for the district of Massachuseets, and it is agreed between counsel for the respective parties herein that the same may be introduced and used in evidence in this case with the same force and effect as though the same were a complete deposition and originally introduced herein; marked "Complainant's Exhibit Royer Deposition in Massachusetts case.")

Examination-in-chief of HERMAN ROYER on behalf of complainant:

58 In response to questions of Mr. WHEATON the witness testified as follows:

My name is Herman Royer; I am of lawful age; I live in San Francisco, and I am by occupation manufacturer of fulled rawhide and belting. I heard the testimony given the other day by Mr. Clerc, in which he stated that he made an automatic reverser for my rawhide machine as early as 1869.

That combination of the reverser with that rawhide machine was not used in public, either when I first made it or at any time after that, prior to my application for a patent. I always observed a rigid secresy about the machine up to the time when I applied for my patent.

Cross-examination:

In response to questions of Mr. CONDEREY the witness testified on cross-examination as follows:

I used that combination in the third floor of my shop. I had a workman regularly employed there by the name of Cruger; but one man worked there. The secresy that there was about it consisted in having one man tending to it, and no more, and
59 having stairs to the room that were quite inaccessible—very inconvenient to walk up, very steep and narrow, and the steps far apart. Besides I kept a trap-door overhead locked with a kind of mechanical appliance, kind of a prop from above, preventing any one from going up except he made signs to the man above, who would then take the proper way to allow the door to swing upward. There was no access to the room in which the machine was except through that door.

In response to a question of Mr. WHEATON the witness further testified as follows:

That trap-door was over the room where the men worked who made leather belting on the floor below. I may say also that the man who worked up there was well paid, above his standard, and that he was very jealous lest some one should look into his part of the business and be able to take his place. I always liked that condition of affairs, because I was anxious that secresy should be preserved.

(By agreement of counsel the reading of the above depositions by the witnesses and the signing of the same by them are hereby waived.)

Testimony closed.

60 *Certificate of Examiner — Deposition-.*

I certify that previous to the giving of his testimony each of the witnesses in the foregoing depositions named was by me duly sworn to tell the truth, the whole truth, and nothing but the truth in the cause in the caption- of said depositions named; that said depositions were taken at the place in said caption named and at the several times in said caption and in said deposition set forth and in the presence of the counsel for the respective parties to said cause; that the said depositions were taken down in writing by me; that the reading of the same to the witnesses and the signing thereof by them, respectively, were, by agreement of said counsel, waived; that I have retained said depositions for the purpose of delivering the same by my own hand to the court for the purpose for which they were taken.

I further certify that I am not attorney nor of counsel for any party to said suit or in any way interested in the event thereof.

In witness whereof I have hereunto set my hand this 11th day of November, A. D. 1885.

S. C. HOUGHTON,

61 *Examiner, &c.*

Accompanying the foregoing deposition and forming part thereof are the exhibits introduced in connection therewith.

S. C. HOUGHTON,
Examiner, &c.

(Endorsed:) Opened and refiled Nov. 11th, 1885. L. S. B. Sawyer, clerk.

62 *Testimony of Herman Royer.*

ROYER *vs.* COUPE.

Admitted by agreement in Royer *vs.* Royer *et al.*, No. 3631, U. S. circuit court, dis. of California, as if taken in said case.

SAN FRANCISCO, *Feb. 6th*, 1886.

Counsel present: For the plaintiff, M. A. Wheaton, Esq.; for the respondents, Manuel Eyre, Esq.

It is stipulated and agreed by counsel for the respective parties here present that the cross-examination of Herman Royer shall be taken down in short-hand by J. F. Gawthorne and afterwards written out by him.

Cross-examination:

HERMAN ROYER called for cross-examination by Mr. EYRE:

Q. I have a printed copy of your deposition in this case. It is the same as filed with the notary, George T. Knox and sworn to by you, is it not?

A. It looks outside like one of them.

Mr. EYRE: I will cross-examine you from your direct testimony as printed.

63 Q. Mr. Royer, was this deposition prepared in conjunction with your counsel, Mr. Wheaton?

A. What does that mean—"in conjunction?"

Q. Was not this direct examination, which is printed, prepared in conjunction with your counsel, Mr. Wheaton?

A. Yes, sir.

Q. It was printed before you were sworn by the notary, was it not?

A. Yes, sir.

Q. You did not give this deposition orally before the notary, did you?

A. I read it to him.

Q. You took this print after it was printed and read it to him?

A. Yes, sir.

Q. And then swore to it?

A. Yes, sir.

Q. Is that all your own language in this deposition?

A. Part of it is and part of it is not.

Q. Were your answers suggested or corrected by Mr. Wheaton as printed here?

A. I wrote out the deposition myself and gave it to Mr. Wheaton.
Q. And was it corrected before it was printed?
A. Oh, yes; he went over it carefully and put things
63 down just the way I wanted him to.
Q. What is your nationality?
A. I am a German by birth.
By Mr. WHEATON: Was not the real object of having your testimony printed on direct examination before you signed it the fact that by so doing copies could be furnished to both parties and both sides know that they had an exact copy of what was of value in the case?
A. That was the intention.
Q. The object, then?
A. That was the intention and object.
By Mr. EYRE: This last answer, and especially the last sentence, is that your own language, Mr. Royer?
The WITNESS: Of what?
Q. This last answer, on pages 16 and 17. I will read it to you, then: "It was the same kind of combination as that described in my patent, and operated in the same manner and produced the same effect and in the same way." Is that your own language?
A. I will tell you this: "I have written my deposition out and presented it before Mr. Wheaton and we went over it together, and he has taken it up and taken it and shaped it to suit him—
65 probably the words of it—but I recognize the most of it as my original expression.
Q. Was not an automatic reverser exactly similar to this one shown in the drawing of patent No. 172,346 made by Peter Clerc in October, 1867?
A. That is not the same. I have not seen the one you speak of, but the principles are the same.
Q. I am referring to the drawings in patent No. 172,346.
A. I have not that before me. I don't know.

Mr. EYRE: I will show it to you.
(The witness is here shown patent referred to.)

Q. Is not that exactly the same as the automatic reverser made for you in October, 1867 by Peter Clerc?

The WITNESS: Is this the same?
COUNSEL: Yes.

A. It is essentially the same.
Q. That was attached to your rawhide fulling machine in October, 1867, was it not?
A. I think it was somewhere about that time.
Q. Will your books tell?
A. No. I do not remember just now. I go upon the testimony of Mr. Clerc. I believe he said so.
66 Q. His testimony was that he charged $118. Did you ever have any single job done by Clerc on which the single charge exceeded over $100 but that one?

A. I do not remember; he has worked for me, off and on, always.

Q. Then this was the only large job?

A. I don't know; it is so long ago.

Q. Mr. Clerc made this reverser, did not he, without any suggestion from you as to its construction?

A. No; he had to make it according to my suggestions.

Q. What suggestions did you make as to its construction?

A. As to its reliability—adjustability, I might say—and its application to that machine of mine; just to the frame-work of it and to the gearing. Of course, the principles are the same.

Q. What he made for you in October, 1867, was exactly similar to the machine shown in the drawings of this patent, No. 172,346, was it not?

A. It was essentially, not exactly, because I had no photograph of them nor an exact copy.

Q. This was attached to your fulling machine in your shop?

67 A. It was.

Q. When used in the machine it turned the fulling machine so many times one way and then reversed and turned it so many times in an opposite direction, and then reversed again, and so on?

A. So it did.

Q. It did that in October, 1867, did it not?

A. I forget.

Q. It did the same thing in 1868, when you got your patent, did it not?

A. Yes, sir.

Q. Could you not stop this machine at any stage of the turning?

A. When the revolutions were ended I could.

Q. When it had made half the revolutions it would make, if untouched, could you not stop it then?

A. Yes; but it never was desirable to do so. It had to be stopped when the revolutions were run out.

Q. You testified in your deposition here, page 5, when the hides were turned by an automatic reverser you could not stop the machine in time to save the hides from great injury?

A. Yes, sir.

68 Q. Before you had an automatic reverser would the machine run one way until reversed by hand, by shifting the belt?

A. Yes, sir.

Q. And you could stop its motion at once if the hides got too hot?

A. I had to stop and reverse it.

Q. When the automatic reverser was attached could you not stop that machine, too, at any stage of the time?

A. I could if I was present and if I was watching the automatic motion. Then I had other things to watch.

Q. But the same attendant that could stop it by hand before you attached the automatic reverser could stop the automatic reverser at any stage of its proceedings?

A. If a man was to be hired to watch both the automatic motion and watch the machine, but the idea was to avoid that man.

Q. But when the automatic reverser had been attached to your machine could you not stop it at any stage of the turning?

A. Oh, decidedly.

Q. You mean to tell me that it took you from October, 1867, to November 15, 1875, over eight years, to find out that this au-

69 tomatic reverser would work with your fulling machine?

A. Oh, well, I saw that it would work a long time before I saw there was any use of having an automatic motion and having a fulling machine both together, and, in fact, having the whole business.

Q. Then you could stop the action, the turning of the shaft of your fulling machine, as easily when the automatic reverser was attached as when it was run by a belt which you could shift by hand?

A. I could stop it.

Q. When Mr. Clerc put that machine up did not he explain to you that if you moved this bar that is shown in the drawing a little higher or a little lower it would give you more chance to move so many times one way and then the other?

A. No; not that way. That is an experiment there. It is not a bar that is lowered up and down, but some pins you call it, or tugs, had to be shifted sideways.

Q. You could increase the number of times or decrease the number of revolutions before reversing?

A. Between certain limits I could; between narrow limits I could.

70 Q. By bringing the shifting bar to the center you could stop the turning of the machine; is not that a fact?

A. By shifting the belt to the center of the pulley, because the shifting of the tumbler, as I call it, would not by itself put the belt on the middle pulley.

Q. But there was no difficulty stopping the revolutions of the machine at any stage before it had completed the number of revolutions, where it was automatically reversed?

A. I could, if I wanted to watch the automatic motion.

Q. Well, anybody that understood the machine—that was tending to it—could stop it at any stage, could not they?

A. Yes, sir; if he was there and watched the automatic motion, when he wanted it he could do so.

Q. Then, will you please explain to me what you meant by this sentence on page 5 of your deposition: "If the hides got hot the automatic reverser would not stop the machine in time to save the hides from great injury."

A. I mean an automatic machine would not work with an intelligence; it would work positively.

Q. The same thing would happen when shifted by hand,

71 prior to the time when you put on the automatic reverser, would it not?

A. To understand that properly the automatic motion was put

there to avoid personal attention within certain limits *within certain limits*, but if I was to depend on the positive action of the automatic motion the machine would go on and damage the hide.

Q. If you found the hide was being damaged when this automatic reverser was attached you could stop the whole machine, could you not, just the same as you could have stopped it before the automatic reverser was on?

A. Yes, sir; when it was too late.

Q. You had to watch the process by which the rawhide was being fulled the same when you had an automatic reverser as when you did the shifting by hand, did not you?

A. Well, you seem to misunderstand the idea of the use of the automatic motion. The automatic motion was put on for the purpose of saving labor. It was not for a toy or superfluous attachment that had to be watched in addition to the machine.

Q. But I ask you this question: You say in your deposi-
72 tion if the hides got hot the automatic reverser would not stop the machine in time to save the hides from great injury. Now, I say, could you not stop the action of the machine as well if the hides got hot when the automatic reverser was attached as you could before the automatic reverser was attached and when you shifted it by hand?

Mr. WHEATON: He has told you at least six times he could.

A. I have said that before.

By Mr. EYRE: You have said it could before, then, did you?

A. Yes, sir.

Q. Then all you had to do was to bring the shifting bar to the center to stop the machine from further turning; that is a fact, is it not?

Mr. WHEATON: Had to bring the shifting bar and shift the belt onto the middle pulley?

A. To move the shifting bar and tumbler, both.

Q. And there is no difficulty in stopping the machine, in any stage of the revolutions, when the automatic reverser was attached?

A. No, sir.

Q. How was your fulling machine run prior to October, 1867, when you attached this reverser? Had you three pulleys?

73 A. No, sir.

Q. How was it run? First in one direction and then the other, and then reversed?

A. By a shifting clutch, one belt, and one pulley.

Q. One belt and one pulley?

A. Yes, sir.

Q. And how did you operate it so as to reverse it and run the other way?

A. By shifting a lever that operated upon the shifting clutch and threw in each wheel alternately; threw every wheel alternately into action, or both of them.

Q. That stopped it?

A. Yes, sir.

Q. Well, do you say that you made any change in this automatic reverser from October, 1867, till you applied for a patent?

A. No.

Q. Now, in this deposition, on pages 8, 9, 10, 11, and 12, you give an explanation of your difficulties in perfecting the process of making fulled rawhide. Would not that apply just as well to your attempt to make a merchantable article by shifting your fulling machine before you ever attached the automatic reverser as afterwards?

74 A. The question is too long; I cannot grasp it; too much predicate.

Q. Would you not have had the same experience if you had continued to shift your reverser or machine in the old way as if you had an automatic reverser?

A. No; there is a little difference in it.

Q. Would you not have encountered the same difficulties that you have explained on pages 8, 9, and 10, 11, and 12, in any event?

A. There is increased difficulties of the automatic motion. I have not read 8, 9, 10, 11, and 12. I don't know exactly what it all contains now.

Q. In the first place, your hides had to be in a certain condition as to moisture?

A. Yes, sir.

Q. That did not make any difference, whether your machine was reversed automatically or not, as to that, did it?

A. Oh, the necessity of a perfect moist condition was more important with an automatic motion; it was essential. By hand I could overcome and watch the machine, but when left to the positive action of the automatic motion any imperfection in tem-

75 perature of the hide was followed by various troubles—to tear off—tearing off or overheating.

Q. You say here on page 11 that you made a finished article of fulled rawhide in 1871, and had gotten your machine so that they worked regularly and smoothly. According to that, it took about four years after you had attached this automatic reverser before you found it would work; is that a fact?

A. Before it would work in conjunction with the process.

Q. Then it did work satisfactory, according to this deposition, in 1871?

A. I saw no defect then.

Q. Then, in 1871, you had obtained this combination with this machine so that it worked regularly and smoothly?

A. Yes, sir.

Q. And four years after that you made your application for a patent?

A. Well, the papers show when I made it.

Q. How long had you been in the business of making this fulled rawhide before you applied to Mr. Clerc to make this automatic reverser?

A. Well, it seems it must have been something like—I don't know—nine months or a year; something about that time.

76 Q. That is, the same year that you got the automatic reverser?

A. I run along a long while before I ever had an automatic motion put on.

Q. Do you remember the time that this fulling machine that you had made by the Vulcan Iron Works was made?

A. Yes, sir.

Q. Have you looked it up?

A. I have not looked now.

Q. Do you remember the date?

A. I don't know what date it was. It was nearly a whole year previous that Clerc was called that I had been running that machine—that is, experimenting with it; of course, I did not do much business with it—but I am not always sure about it.

Q. Then you think it was a year before you attached the automatic reverser?

A. It may be nine months or a year, whatever it is.

Q. When you first went into business to continue you had one of those machines made by the Vulcan Iron Works?

A. I don't know about the continuing now.

Q. You are speaking now of going into business by yourself?

77 A. Well, I was experimenting. I had set my mind upon trying that process to the bottom of it.

Q. And then you had one of these machines made. Was that similar to the machine shown in the patent to you and Louis, taken out afterwards?

A. Yes, sir.

Q. That was the same kind of a machine?

A. Yes, sir.

Q. Had the same upright bar and central shaft to it?

A. Yes, sir.

Q. Now, will you tell me what part, if any, of the reverser you planned?

A. Part of the reverser?

Q. Yes.

A. The parts are essentially the same as shown on a washing machine such as have been mentioned in the patent. The sketch in the patent being only a pen sketch it does not give an exact, positive, and absolute representation, but the description of the machine in the patent is a description of the identical machine.

Q. The identical automatic reverser made by Mr. Clerc in 1867, is it not?

78 A. Yes, sir.

Q. You did not make any improvement in its gearing or any part of it, did you?

A. It is essentially the same automatic motion.

Q. The gearing on a washing machine was a straight gear. Did you ever see one attached to a washing machine?

A. I never seen any before mine were made. I have seen many years after.

Q. Well, Mr. Clerc changed from a straight gear to a bevelled gear to adapt to your machine?

A. I don't know what he has changed.

Q. You do say an automatic reverser that he made for you was attached by bevelled gear to the machine, was it not?

A. Yes, sir.

Q. And he made that change, of course, in making the automatic reverser from a straight to a bevelled gear?

A. I don't know what he made then; he says he did.

Q. The depositions on pages 16 and 17 contains a reiteration of the essentials which the courts have decided go to make up an equivalent or infringement. Is that your language?

79 A. I don't know anything about the prefixes of the question *the prefixes of the question*. I know that what is down here is my statement. I recognize lines in it as mine, and some changes, I think, were Mr. Wheaton's wording.

Redirect examination:

By Mr. WHEATON: Whose idea was it to apply an automatic reverser to the fulling machine?

A. Oh, that was mine.

Q. Who first suggested it?

A. I first suggested it.

Q. Who actually made the combination?

A. I made the combination.

Q. Now, from the time that you made the combination of the automatic reverser and fulling machine was the use of the combination secret from that time forward until you applied for a patent, or was it public?

A. I always kept the machine with the automatic motion and the process in my place secret.

Recross-examination:

By Mr. EYRE: Did not Mr Clerc attach this automatic reverser to your fulling machine in your shop?

80 A. He did not.

Q. Then he is mistaken when he says so?

A. He gave me instructions.

Q. When you put it together in 1867 did not it work then—the machine itself?

A. I made it work.

Q. The same combination, if you call it such—did not it perform the same functions in 1867 that it did after that?

A. It shifted the same.

Q. Worked and reversed in the same mode and manner, did it not?

A. Yes, sir.

It is stipulated and agreed that the foregoing testimony may be printed and a printed copy thereof signed by the witness.

(Endorsed:) Filed Nov. 11, 1885. L. S. B. Sawyer, clerk.

(Here follows diagram marked page 81.)

H. ROYER. 81

MACHINES FOR TREATING RAW-HIDE.

No. 172,346. Patented Jan. 18. 1876.

No. 350.
Royer
vs.
Rothrd.
} p. 81.

Fig. 1

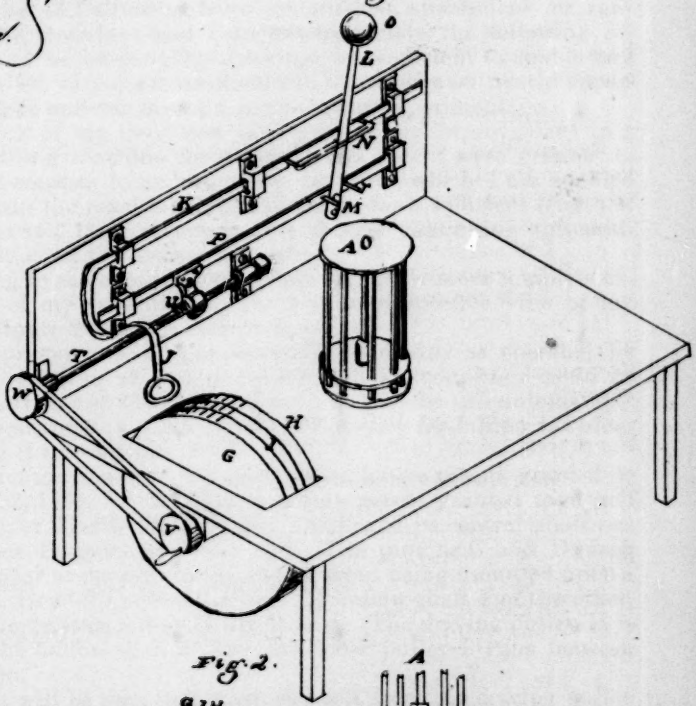
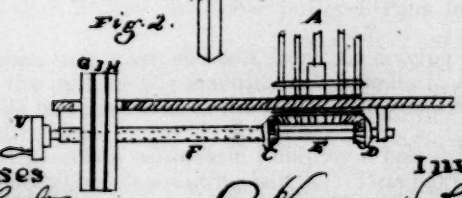


Fig. 2.



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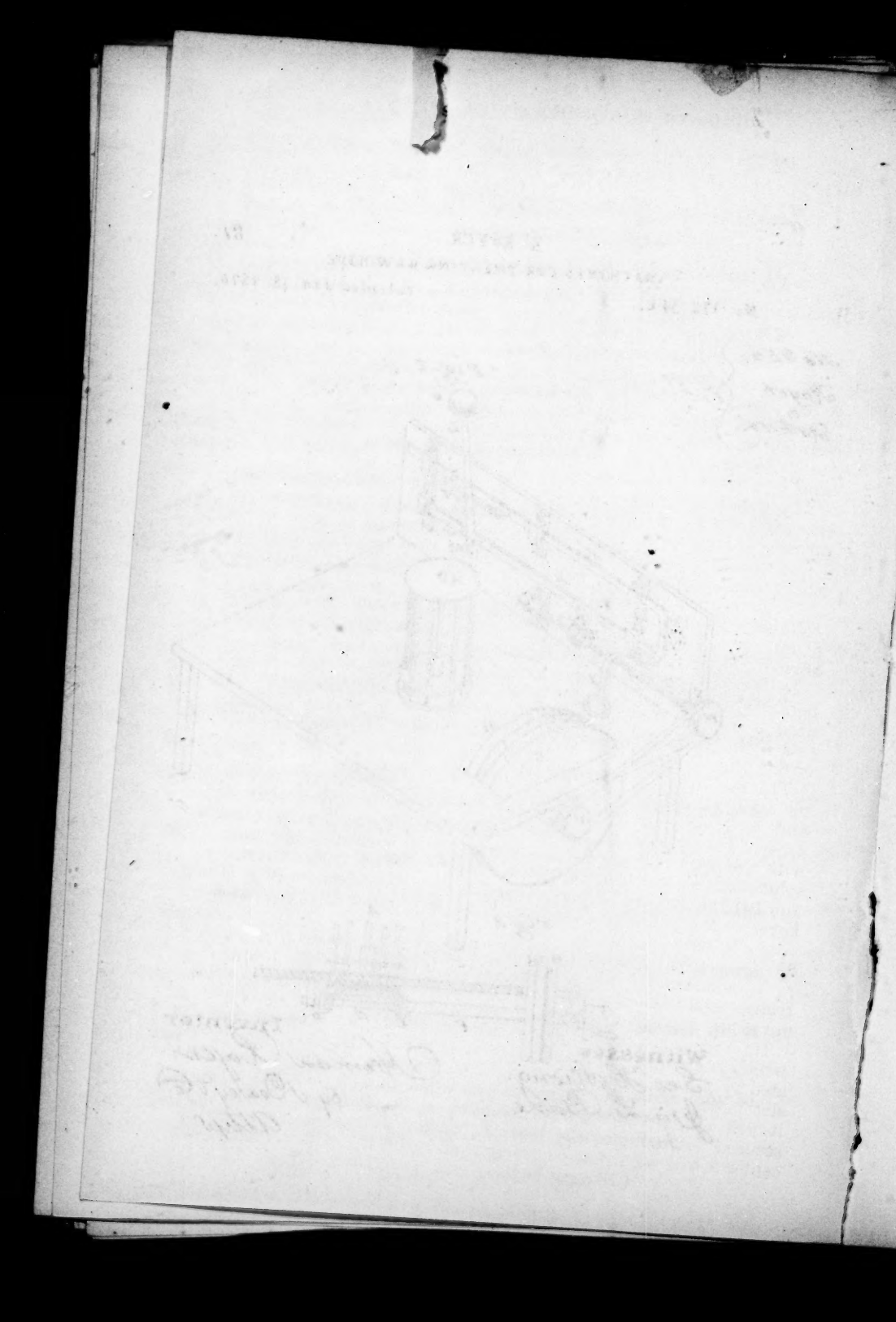


81 COMPLAINANT'S EXHIBIT A.

UNITED STATES PATENT OFFICE.

HERMAN ROYER, of San Francisco, California.

Improvement in Machines for Treating Rawhide.

Specification forming part of Letters Patent No. 172,346, dated January 18, 1876; application filed November 15, 1875.

To all whom it may concern:

Be it known that I, Herman Royer, of San Francisco city and county, State of California, have invented an attachment for rawhide fulling machine; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or experiment.

The object of my invention is to provide an improvement in a rawhide fulling machine for which letters patent were granted to me, and it consists in an automatic device by which I am enabled to run the machine in one direction for a sufficient length of
82 time and then reverse it, this process continuing automatically until the leather is finished.

Referring to the accompanying drawings for a more complete explanation of my invention, figure 1 is a perspective view of my device. Figure 2 is a side elevation.

In the present case I have shown my machine as operated by belts; but it will be seen that gears or friction couplings could be used, if desired, and the action of my machine be still automatic.

A is the drum of a machine which I employ for fulling rawhides or forming it into leather.

This machine is more fully described in letters patent granted to me June 22, 1869, No. 91772, and letters patent granted to myself and L. Royer March 12, 1868, No. 77920, and its central shaft has a bevel gear, B, upon its lower end. The pinions C and D mesh with this gear at opposite sides, one of them being mounted upon a solid shaft, E, which passes through the hollow shaft F of the other, and has the driving pulley G keyed to it. The driving pulley H is keyed to the hollow shaft F, and the loose pulley I runs between them.

83 It will be seen that when the belt from the driving pulley turns one of the pulleys the machine will operate in one direction, and when the belt is shifted to the other pulley it will operate in the opposite direction.

In order to make this action automatic I employ a belt-shifter, J, which is a part of or attached to a sliding bar, K. This bar is operated by a lever, L, which is hinged or pivoted at M, and works in a slot or link, N, upon the bar, so that when turned from side to side it will slide the bar in one direction or the other. A weight, O, is secured to the top of the lever L, so that as soon as it passes the center it will fall by its own weight and shift the belt suddenly.

In order to operate this lever I have fitted another sliding bar, P, to move below and parallel with the bar K, and this bar has pins *r r* upon each side of the lever L, so that when the bar is moved it will shift the lever. The bar P has a nut, S, projecting downwards from it, and a horizontal shaft, T, has a screen, U, formed upon it so as to fit the nut S. A bolt from the pulley V upon the
84 shaft E extends to the pulley W upon the shaft T, and by its action the screw will be turned in one direction until the lever L has passed the center and fallen over, so as to shift the belt to the other pulley, when the whole mechanism will be moved in an opposite direction until the screw has again moved the bar and reversed the lever.

By this construction I am enabled to make my machine automatic in its action, and it can be left until the work is entirely finished. A frictional coupling or reversing gear might be used in place of a belt, but they would not work as well.

Having thus described my invention, what I claim and desire to secure by letters patent is—

In combination with the drum A of a rawhide fulling machine, operating to twist the leather alternately in one direction and the other, a shifting device for the purpose of making the operation automatic and continuous, substantially as described.

HERMAN ROYER.

Witnesses:
GEO. H. STRONG.
JNO. L. BOONE.

(Endorsed:) Opened and refiled Nov. 11, 1885. L. S. D. Sawyer, clerk.

85 COMPLAINANT'S EXHIBIT ROYER DEPOSITION IN MASSACHUSETTS CASE.

Deposition of Herman Royer.

United States Circuit Court, California. No. 3631.

By Mr. WHEATON:

Q. Please state your name, age, residence and occupation.

A. My name is Herman Royer; I am of lawful age; I reside in San Francisco, California, and I am a belt-maker and also a manufacturer of fulled rawhides.

Q. Are you the complainant in this case?

A. I am.

Q. Are you one of the patentees to whom United States letters patent number 77920, and bearing date May 12th, 1868, were granted?

A. I am.

Q. When you first used that machine what method was adopted to cause the frequent reversing of the central shaft that was necessary in treating rawhides in the machine?

A. The motion of the central shaft was reversed by hand
86 and by use of a lever and shifting clutch. It required a workman to attend constantly and shift the clutch, so as to make it engage alternately with the beveled pinion wheel and thereby cause the shaft to reverse.

Q. Why did you not apply an automatic reversing apparatus to the machine when you first commenced using it?

A. The machine itself was at that time an experiment, as was also the operation which it performed. It was the first machine of its kind that was ever made, and no one knew how well it would perform its work, nor did any one know whether or not the work of the machine when performed would be valuable and useful. In testing the machine during its early operations I encountered great difficulty from the fact that the hides would not double backwards uniformly. The hides were fastened by either one edge or one end to the central shaft of the machine, and the shaft was then made to revolve in one direction until the hides were entirely would around the shaft. As many hides were put into the machine at once as the cage or drum would hold, so that when the hides were wound around the shaft they were lightly compressed within the upright circle
87 of rods or pins that formed the cage or drum of the machine. When the shaft was reversed the hides while under this pressure had to begin to unwind from the shaft, and at the same time had to wind upon it in the opposite direction. When the hides are entirely wound around the shaft in one direction, as I have described, they remain wound around the shaft constantly, either in one or both directions, while in the machine. When the shaft reverses the coil of hides already formed remains stationary in the machine, except that part in the center of the coil, which begins to rewind upon the shaft in the new direction. As fast as the coil rewinds in the new direction upon the revolving shaft it forms a new coil around the shaft in the new direction and is carried around with the shaft, while that part of the hides which remains in the coil last made remains stationary, and is still wound around the shaft in the direction opposite from that of the new coil. The same hide makes a part of both coils, being partly in one and partly in the other, but being constantly wound out of one into the other.

88 There is no unwinding of the hides except just at the double or point where the outside fold of the new coil being formed is meeting and taking the inside fold of the last or stationary coil. This point is constantly progressing forward. As the shaft revolves the new coil which is carried around with the shaft and is in motion keeps growing larger while the last coil keeps losing its inner folds as they are rewound onto the new coil until the whole of the last coil is rewound onto the new coil, when the shaft is again reversed and the operation is again repeated. This unwinding of the hides from the shaft from one direction and rewinding them upon the same shaft in an opposite direction, while the hides were compressed within the cage, caused a short bending or doubling to begin at the part of the hide next to the shaft, and to move or progress through the hides until they were entirely rewound around the shaft in the

opposite direction from that in which they were last wound around it. As often as the hides were entirely wound around the shaft in one direction the shaft would be reversed, and
89 the unwinding of the coil of the hides and the rewinding of them in a new coil in the opposite direction around the same shaft, and thus carrying a progressive bend or doubling entirely through the hides, would be repeated.

This unwinding and rewinding was but one operation, and it was repeated until the bending or doubling of the hides, which would be first in one direction and then in the opposite direction, had reduced the hides to the soft, pliable condition desired. While I was so using the machine and reversing it by hand it often happened that the unwinding and the rewinding of the hides would become irregular and the bending or doubling backward would cease. In such cases the hides would sometimes turn around bodily inside of the cage.

Sometimes they would so turn bodily for awhile and then again resume their action of unwinding and rewinding; at other times they would wedge tightly in the cage or drum and refuse to move in any direction. In such cases the edges or ends of the hides that were fastened to the revolving shaft would be torn from their fastenings. I have had the edges of the hides, where they were fastened to the revolving shaft, torn off from the hides many hundreds
90 of times. In such cases the machine had to be stopped and the drum taken apart in order to get the hides out. The attendant who shifted the clutch to cause the machine to reverse kept constant watch, and as soon as he discovered the least irregularity in the operation of the machine he would instantly either stop the machine or reverse its motion. Sometimes the regular working of the machine could be restored by thrusting a stick between the bars of the drum in such a way as to catch the outside hide between the end of the stick and one of the stationary bars of the cage or drum and to stop the entire mass of hides from being carried around bodily inside of the drum by the shaft.

Whenever the hides turned around in a body with the shaft the operation of unwinding and rewinding ceased, and all benefit of the revolutions so occurring would be lost and the shaft would therefore have to revolve more times in the direction in which it was then running before being again reversed than it would when no irregularities occurred.

At other times, after the hides had become partly softened by being worked in the machine, they would pack so tightly in
91 the drum while they were being treated that they would become very hot, and unless the shaft was quickly stopped the hides would be overheated and spoiled.

For these reasons it did not for a long time seem to me to be practicable to attach to the machine an automatic reversing apparatus. An automatic reversing apparatus would let the shaft revolve a certain number of times in one direction and then it would reverse, whether the hides were at that time all wound around the shaft in one direction or not. If the hides got hot an automatic reverser

would not stop the machine in time to save the hides from great injury. Notwithstanding all these difficulties, I at last determined to try the experiment of attaching an automatic reversing apparatus to the machine and see whether it could be made practically operative or not. I did not believe for a long while that it would be possible to apply an automatic reversing motion to the machine, because I believed the wedging and packing of the hides, as mentioned, would always require that the machine should be stopped whenever the wedging or packing began, and that it would not do to let
92 the machine run an arbitrarily given number of times in one direction before it was reversed and caused to revolve in the opposite direction. I believed that the amount of wedging and packing of the hides in the machine would be so frequent that the damages occasioned thereby, by having only an automatic reverser that would not stop the machine or cause it to reverse when the wedging and packing began, would be so great that the application of an automatic reverser to the machine would be impracticable and unprofitable.

Q. When you first applied the automatic reverser to the fulling machine how did the new combination operate?

A. It did not operate well. The troubles occurred which I had anticipated and feared, and they were increased and aggravated by the arbitrary action of the automatic motion. The hides would double twice in the cage, and before I had sufficient warning to stop the machinery they would tear off from the shaft.

At the point of doubling, which is always in the coil at the place where the winding and unwinding meets, an enlargement existed. The machine often reversed before the unwinding was com-
93 pleted, and thereby left the double and consequent enlargement still in the coil of hides. The new fold or doubling point that was formed by the reversing of the shaft would run along until the doubling point met the enlargement of the last fold that was still left in the coil of hides, because the machine had reversed too soon. The enlargements of the two folds or doubles would meet and the hides would join in the cage and be torn from the shaft. Then I had to take the cage apart and take the hides out. This was a work that it took several hours to accomplish.

Hundreds of times the torn-off hides had compelled me to try again before I had put on the automatic reverser. This occurred much more frequently after the automatic reverser was put on. It occurred so often with the automatic motion as to be disheartening. I thought then at times that I must give up the entire business as a failure. At that time I had not succeeded in either producing the article I was trying to produce nor had I perfected any process that would produce it.

The article that is now known to the world as fulled rawhide had never yet been made. I, however, kept on trying. I varied
94 the conditions of the hides as to moisture until I found that at the right degree of dampness the hides would double backwards with practical regularity. I also changed the means by

which I fastened the hides to the shaft several times. At last I succeeded in making the combination a practical success.

Q. How long was it after you first combined the automatic reverser with the fulling machine before you finished making changes and experiments for the purpose of improving the action of the combined machine?

A. I cannot remember the exact time, but it was at least four years.

Q. Can you give a general idea of the nature of the changes and experiments which you made, with the circumstances connected therewith, so far as such circumstances will enable the court to better understand why such changes and experiments were necessary to the successful working of the reverser in combination with the fulling machine?

A. I will try to do so. The only object of the combined machine was its use in trying to produce and manufacture the article now known as fulled rawhide. To manufacture the article, the
95 hides of which it was made had to be made soft and pliable by being subjected to an intensely severe and long-continued mechanical operation, such as twisting or doubling back and forth. In order to have this mechanical operation reduce the hides to a soft and pliable condition, the hides themselves had to be in a certain condition as to moisture. If the hide was too dry and hard it would not work well in the machine, but would break and kink and be damaged in irregular lines and streaks. If the hides were too wet the mechanical action would not affect them, and they could not be made into fulled rawhide. I had, therefore, to keep making my experiments with hides at nearly the same degree of moisture, and yet had to keep changing that degree of moisture by slight variations until I found a degree of moisture that would reduce the hides to a condition in which they could be successfully worked in the combined machine and made into fulled rawhide.

While making my experiments I did not know whether or not there was a possible condition of moisture to which the hides could be reduced, in which they could be treated in the machine
96 with an automatic motion and not be so wet that they would not make good fulled rawhide. I had found that if the hides were quite wet they could be treated in the machine without kinking or puck-ing or other irregular action, but I had also found that in such case the mechanical action would not have the effect of making the hides sufficiently soft and pliable when they became dry.

In order to make the hides soft and pliable when they are dry the cohesion of their fibers had to be broken up. The fibers themselves should not be broken, but they have to be loosened from each other. When the hides are wet the water makes them soft and limber for the time being, and they will double back and forth in the machine without loosening the fibers from each other.

To show the difficulties that I met with and had to overcome, I will here state that I worked incessantly and constantly from the year 1867 forward to the year 1871 in trying to make an article of rawhide that would retain its natural strength, and which could be

used as an article of commerce for lacing and belting and
97 ropes and similar articles. To accomplish this result I had to discover some mechanical means by which all parts of every hide could be subjected to an equal and uniform amount of mechanical action, which mechanical action must be very powerful and long continued, so that no hard spots would be left in the hide. One of the great troubles was to avoid having hard spots left in the hide in spite of the mechanical treatment.

There is a great difference in the thickness of the different parts of all hides. Some parts of the hide are three times as thick as other parts of the same hide. This was one cause of the great trouble I had in discovering whether or not there was a degree of moisture to which the hides could be reduced at which they could be successfully treated in the combined machine. It took much more soaking to moisten the thick parts of the hide than it did the thin parts. I finally learned how to moisten the entire hide uniformly by peculiar ways of folding it while moistened, hanging it so that some parts of the hide would be longer in water than other parts, *ect.*

I was all the while doing all this work in the dark, not
98 knowing what the ultimate result would be. Besides the difference in the thickness of the different parts of the same hide, there is also a great difference in the texture of the different parts of the hide. Besides all of this, there are no two hides that are alike as to thickness and texture. I many times worked hides in the machine, while trying my best with the lights then before me, and the hide would come out of the machine overheated, and thereby injured by the mechanical action in some places, while there would yet be raw, hard spots in other places in the same hide.

I also had to discover some means by which the hides could not only be preserved indefinitely in the soft and pliable condition to which the mechanical action had reduced them, as they would always naturally return to a hard condition if they were merely made soft by mechanical action and then laid away as merchandise, but I also had to discover and apply means that would preserve the hides, after being softened by mechanical operations, against moulding and the effects of damp atmospheres, and also protect them against the attacks of rats, mice, and vermin.

99 I had not obtained all of these results until the year 1871. It was with me a constant series of struggles, experiments, and efforts to overcome obstacles during all of those years.

Even after I had made a finished article of fulled rawhide in 1871, and had gotten my machines and processes so that they worked regularly and smoothly, I still did not know whether the fulled rawhide that I made would withstand the effects of time and the different conditions to which it would be subjected when it would be dealt with as an article of commerce or not. I knew it was good and admi-rable for immediate use.

About the first of the year 1872 I shipped some of the fulled rawhides to New York to John Fell, a commission leather merchant, who kept a store at number nine (9) Jacob street, in New York. He did not sell the fulled rawhide that I sent to him, and it remained

in the store until about the month of September, 1872, when I went to New York and saw it there. It was the same fulled rawhide that I had shipped to John Fell, but the store had changed hands.

The fulled rawhide was in a perfect state of preservation
100 and had not deteriorated in any of its qualities, and I then knew for the first time that I had produced an article of fulled rawhide such as I had so long been struggling to obtain—an article that would retain its good qualities and could be dealt in as an article of commerce.

Up to the time that I returned here from the East, which was in October, 1872, I had never been able to sell the fulled rawhide that I made for as much as it cost me to make it. It was not until the fall of 1872 that I could make the business of manufacturing and selling fulled rawhide pay its own expenses. I began shipping it East in 1872 in a small way. As it became better known my sales increased, from 1872 to 1875, in California, and in the East my sales continued up to the year 1875 in a small way. What was sold in the East during that time I manufactured here in California and shipped to the East. I could not fill many of the orders from the East because I had not sufficient capital to do the business with.

In the beginning of 1875 I had acquired considerable financial strength from the business, and I built a factory of my own
101 and prepared to do a larger business and supply all orders from all sources for the new article of fulled rawhide.

By this time the article became so well known and the demand for it had increased so largely that parties in the East began to manufacture and supply the market, and my sales in the East almost all ceased in the year 1875. An immense business is now done in the East by several parties who are manufacturing and selling the new article of fulled rawhide. They all use machines similar to my machines and processes similar to my processes. They are all following in my footsteps, and they are not only supplying the East with fulled rawhide, but they have been shipping it to San Francisco and selling it in competition with mine since 1875. Prior to 1875 I never saw or heard of a single piece of the article now known as fulled rawhide being upon the market, except that of my own manufacture. Now I believe that the value of this article of fulled rawhide that is manufactured in the East exceeds four thousand dollars per day.

In order to make the combination of an automatic revers-
102 ing device with the drum of the fulling machine operate successfully I had to take and did take the following steps, viz: I had to ascertain the number of revolutions which it was proper for the shaft to make in each direction before it was reversed, and then I had to partly select and partly plan a reverser that would force the shaft to reverse when it had made the right number of revolutions.

I also rearranged the shaft and the gearing that operated it in my machine so that they would reverse when the driving belt was shifted to the different pulleys. I thus modified and adapted the reversing device and the gearing of the machine so that they would operate to-

gether as to make the shaft revolve the proper number of times in each direction before being reversed. After this was all accomplished I still worked with the machine a very long time, as I have already stated, before I knew whether or not the combination could ever be used successfully or practically to do the work for which it was intended.

Q. To whom, if any one, did you first make application
103 to construct and apply to your machine an automatic reverser?

A. I first applied to Henry Hultner, a mechanical draftsman, employed at that time, I think, by the Vulcan Iron Works, in San Francisco. William Birch was foreman in the same place. I described the kind of device I wanted to Hultner, but he thought something different would be better, and we did not come to any conclusion as to what was best, and I next went to William Birch, the foreman. The fulling machine that I had then in use, and the only one I had up to that time, was made at the same place—the Vulcan Iron Works. When I went to Mr. Birch he told me to go to Mr. Clerc, and I went to him and described what I wanted. He was making reversing apparatus for washing machines. I had him modify the plan of his reversing devices so that it would be applicable to my machine. I also had the shafting part of my machine changed so that the reversing apparatus would better combine and operate with the machine. Mr. Clerc did the mechanical work of making these changes.

104 (Endorsed:) Opened & refiled Nov. 11, 1885. L. S. B. Sawyer, clerk.

105 *Order Allowing Appeal, &c.*

At a stated term, to wit, the February term, A. D. 1886, of the circuit court of the United States of America of the ninth judicial circuit in and for the district of California, held at the court-room, in the city and county of San Francisco, on Thursday, the 27th day of May, in the year of our Lord one thousand eight hundred and eighty-six.

Present: The Honorable George M. Sabin, U. S. district judge for the district of Nevada.

HERMAN ROYER
vs.
SOLOMON ROTH *et al.* } No. 3631.

This cause, heretofore heard and submitted to the court for consideration and decision, having been duly considered, it is ordered
that the bill of complaint herein be dismissed and that a de-
106 cree be filed and entered herein accordingly.

On motion of M. A. Wheaton, Esq., solicitor for the complainant herein, it is ordered that an appeal from the final decree of said circuit court, this day filed and entered herein, being a day in the February, 1886, term of said circuit court be, and the same hereby is, allowed, and that a certified transcript of the pleadings, deposi-

tions, stipulations, and proceedings be forthwith transmitted to the Supreme Court of the United States.

107 *Bond on Appeal.*

In the Supreme Court of the United States.

HERMAN ROYER, Appellant,

vs.

SAMUEL ROTH and L. P. DEGEN, Appellees.

Know all men by these presents that we, James Patterson and Abner Doble, are held and firmly bound unto Samuel Roth and L. P. Degen, the above-named appellees, in the sum of five hundred dollars, lawful money of the United States of America, to be paid to the said Samuel Roth and L. P. Degen, their executors or administrators; to which payment, well and truly to be made, we bind ourselves and each of us, jointly and severally, and our and each of our heirs, executors, and administrators, firmly by these presents.

108 Dated this 1st day of June, A. D. 1886.

The condition of the above obligation is such that whereas said Herman Royer has taken an appeal to the Supreme Court of the United States to reverse the decree filed and entered by the circuit court of the United States of America, of the ninth judicial circuit, district of California, in the cause entitled Herman Royer, complainant, against Samuel Roth and L. P. Degen, respondents, No. 3631, which said decree was filed and entered in said circuit court the 27th day *day* of May, A. D. 1886, being a day in the February term, A. D. 1886, of said circuit court:

Now, therefore, if the above-named Herman Royer shall prosecute his said appeal to effect and answer all costs and damages if he shall fail to make good his plea, then this obligation shall be void; otherwise to remain in full force and effect.

JAMES PATTERSON. [SEAL.]
ABNER DOBLE. [SEAL.]

Signed, sealed, and delivered in presence of—
L. S. B. SAWYER.
F. D. MONCKTON.

109 UNITED STATES OF AMERICA, } *ss:*
District of California, }

James Patterson and Abner Doble, being duly sworn, each for himself says that he is a householder within the district aforesaid, and that he is worth the sum of five hundred dollars exclusive of property exempt from execution and over and above all his just debts and liabilities.

JAMES PATTERSON.
ABNER DOBLE.

Subscribed and sworn to before me this 1st day of June, A. D. 1886.

L. S. B. SAWYER,
Comm'r of U. S. Circuit Court, 9th Circuit,
District of California.

Endorsed.

The form of the within bond and the sufficiency of the sureties therein are hereby approved this 3d day of June, 1886.

GEO. M. SABIN, *Judge.*

Filed June 3, 1886.

L. S. B. SAWYER, *Clerk.*

110 In the Circuit Court of the United States for the Northern District of California.

HERMAN ROYER
vs.
SOLOMON ROTH *et al.* } No. 3631.

I, L. S. B. Sawyer, clerk of the circuit court of the United States for the northern district of California, do hereby certify the foregoing one hundred and nine written pages, including a diagram, numbered from 1 to 109, inclusive, to be a full, true, and correct copy of the record and all proceedings in the above and therein entitled cause, and that the same together constitute the transcript on appeal to the Supreme Court of the United States in said cause.

Attest my hand and the seal of said circuit court this 4th day of September, A. D. 1886.

[Seal U. S. Circuit Court, Northern Dist. Cal.]

L. S. B. SAWYER, *Clerk.*

111 UNITED STATES OF AMERICA, *ss:*

To Solomon Roth and L. P. Degen, Greeting:

You are hereby cited and admonished to be and appear at the Supreme Court of the United States to be held at the city of Washington, in the District of Columbia, on the eleventh day of October, A. D. 1886, pursuant to an order allowing an appeal from the final decree of the circuit court of the United States for the district of California, in the cause wherein Herman Royer is appellant and you are appellees, to show cause, if any there be, why the said decree in the said cause mentioned should not be corrected and speedy justice should not be done to the parties in that behalf.

Witness the Honorable George M. Sabin, U. S. district judge for the district of Nevada, assigned to hold and holding circuit court, this 3rd day of June, A. D. 1886, and of the Independence of the United States the one hundred and tenth.

GEO. M. SABIN, *Judge.*

112 [Endorsed:] No. 3631. In the Supreme Court of the United States. Herman Royer, appellant, *vs.* Solomon Roth and L. P. Degen, appellees. Citation.

Service of a copy of the within citation is hereby acknowledged this 4th day of September, 1886.

MANUEL EYRE,
J. F. COWDERY,
Solicitors for Respondents and Appellees.

Endorsed on cover: California C. C. U. S. No. 350. Herman Royer, appellant, *vs.* Solomon Roth and L. P. Degen. Filed September 20, 1886.

6-4350

Office Supreme Court U. S.
FILED
APR 28 1888
JAMES H. McKENNEY
CLERK

No. 350.

OCTOBER TERM, 1888.

IN THE

SUPREME COURT

OF THE

UNITED STATES.

HERMAN ROYER,
Appellant,

VS.

SOLOMON ROTH and L. P. DEGEN,
Appellees.

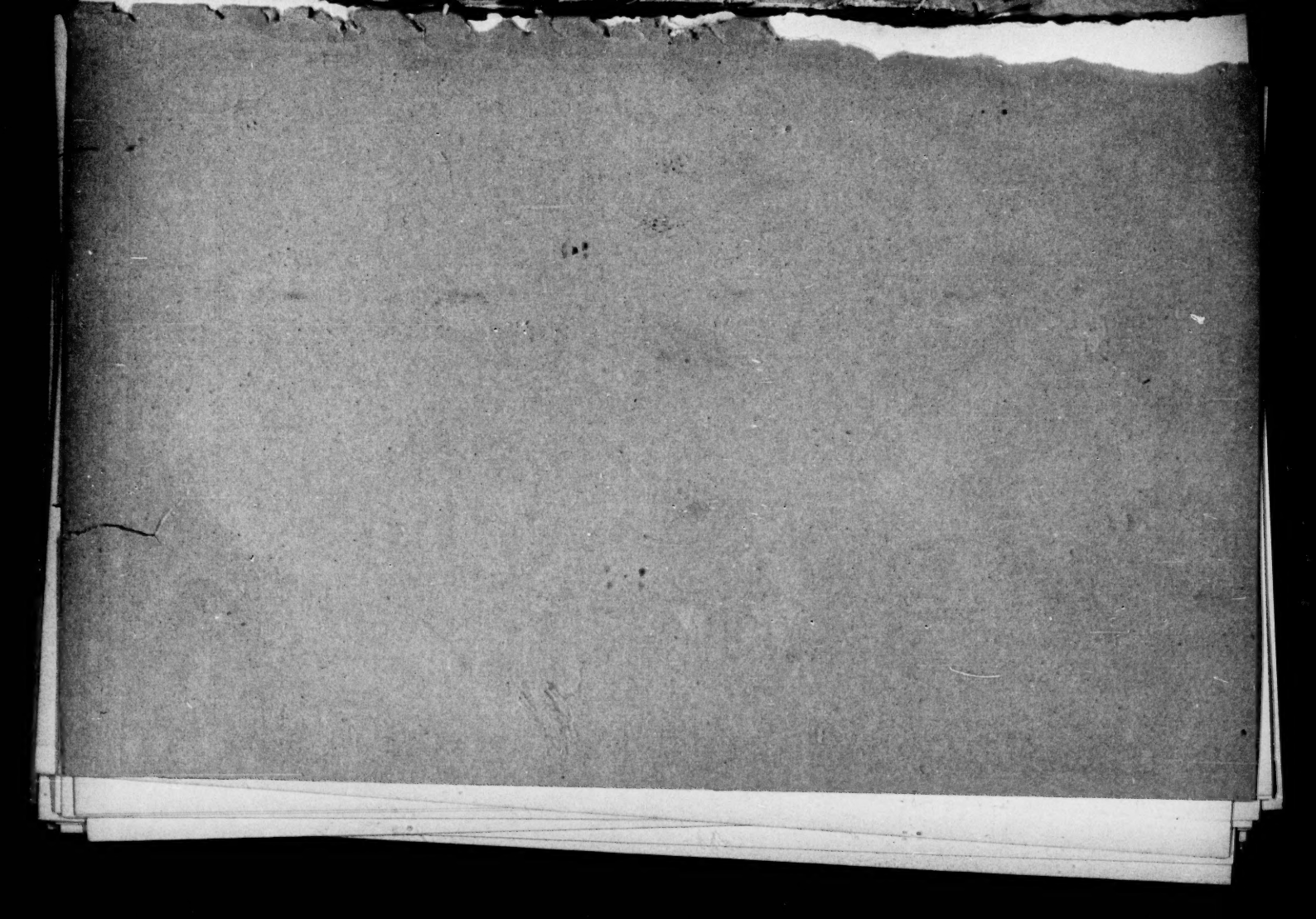
APPELLANT'S BRIEF.

M. A. WHEATON,
Counsel for Appellant.

Filed ..... *1888.*

..... *Clerk,*

By ..... *Deputy Clerk.*



In the Supreme Court

OF THE

UNITED STATES

HERMAN ROYER,

Appellant,

vs.

SOLOMON ROTH, AND
L. P. DEGEN,

Appellees.

APPELLANTS' BRIEF.

This was an action brought in the United States Circuit Court, Ninth Circuit, in the District of California, for an infringement of United States Letters Patent No. 172,346, bearing date January 8, 1876, and granted to Herman Royer for a combination with the drum of a rawhide fulling machine, operating to twist the leather alternately in one direction, and then in the other, of a shifting device, for the purpose of making the operation automatic and continuous, as described in the patent.

The action is in equity, and was brought by Bill in the usual form, and the equitable relief usually granted to a successful complainant in

actions for the infringements of Letters Patent was prayed for. The bill is in the transcript at pages 1, 2 and 3. The defendants answered separately. The answer of the defendant Degen is in the transcript from pages 4 to 7, and the answer of defendant Roth is in the transcript from pages 7 to 9.

Replications were duly filed. They are in the transcript, at pages 9 and 10. Testimony was taken in the case, and at the final hearing the Court decided the case in favor of the defendants, and entered a final decree dismissing the bill. From this final decree of the Circuit Court the complainant has appealed to this Court.

The appellant here assigns the action of the Circuit Court in entering the final decree dismissing the bill as error. Appellant claims that the decree appealed from is erroneous, in that it dismissed the complainant's bill when, as appellant claims and asserts, it ought to have decreed and adjudged under the pleadings, and the testimony taken in the case, that the allegations of the bill were sustained and that the complainant was entitled to the relief which he prayed for in his bill.

Appellant's Points.

The Letters Patent sued upon are in the transcript at pages 30 and 31. The patent is for a

COMBINATION of two devices, and it does not purport to cover by its claim either of the devices separately, as a device. The two devices combined are: 1. The drum of a rawhide fulling machine operating to twist the leather alternately in one direction and the other; and 2: A shifting device for the purpose of making the operation automatic and continuous. Since the claim of the patent does not cover either one of the devices as such, but covers a "*combination*" of the devices only, it matters not, so far as this patent is concerned, whether Royer invented the separate devices or not.

The bill states on its face that the invention was of a *combination*. (Transcript, folio 1.)

The answers do not fairly meet this allegation of the bill, but instead of denying that Mr. Royer invented the *combination* alleged, they deny that he invented the shifting device (folios 13 and 20). As the bill does not allege that he did invent the shifting device, these denials in the answer do not meet the allegations of the bill. The answer of Roth practically admits that he infringed the patent. (Transcript, folio 21.) It states affirmatively that the same kind of shifting device was made and used at various places in washing machines. (Transcript, folios 21, 22 and 23.) It also states in substance that Royer did not invent the improvement claimed in the

patent, but says that he applied to Peter F. Clerc to make the shifting device and to apply the same to a rawhide fulling machine that Royer was then using, and that Clerc did so make and apply the device.

The evidence, however, shows that Clerc did not apply the shifting device to the rawhide fulling machine, but that Royer alone conceived the idea of the combination, and that he alone made the combination. (Transcript, page 30 and folios 50, 51 and 52 on pages 18 and 19.)

The answer of defendant Degan is substantially the same as that of Roth, except that he denies having infringed the patent, and sets up other matters of anticipation, none of which were proved or attempted to be proved. No evidence whatever was given in respect to such of the anticipatory matter as was set up in Degan's answer and not set up in Roth's answer.

By agreement of the parties some of the testimony in this case was transferred to it from another case in which it had already been taken.

No anticipation of the invention was proved, and the infringement of the defendants was established. Upon these points there was practically no dispute. Roth not only admitted the infringement in his answer as already mentioned, but he also testified to it. In doing the acts

which constituted the infringement he was in the employ of defendant Degan, and the infringement of one was the infringement of both. (Transcript, pages 20 and 21.)

The Court decided that the patent did not cover any patentable invention, and "for this reason alone" it decreed the dismissal of the bill. (Transcript, folio 32.)

The decree of the Court is in the transcript, from folio 30 to 33. In it the Court has with the most perfect fairness stated the facts of the case as established by the evidence, and has also stated the fact that the decree of dismissal is made upon the sole ground that the patent does not cover any patentable invention.

The one question, then, as we understand the case, for this Court to determine, is whether or not the patent does or does not cover a patentable invention.

Argument.

In making our argument upon this proposition, we urge upon the attention of the Court the fact that the patent is for a *combination* alone. This is the one fact which we have failed, as we think, to impress upon the mind of the Circuit Court. We ask this Court to consider the patent *for what it covers*, and not for something which its claim does not even purport to cover. We

assert that it does not cover the invention of the shifting device, nor does it cover the rawhide-fulling machine. It is true that Royer was one of the inventors of the fulling machine as it was originally made, but this patent is for something else, and that something else is for a *new combination*, and it is not for anything but a *combination*.

We ask the Court, therefore, to apply to this patent the rules of patent law *which apply to combinations only*. We make our argument upon the assumption that the Court will, in this respect, do as we request. The Circuit Court found and decided that the patent was granted as alleged in the bill, and that the complainant has ever since been and still is the owner of it as alleged in the bill. Also, that the defendants infringed the patent as alleged in the bill. The Court also found that the complainant first conceived of the combination as described and claimed in the patent. Also, that one Clerc, a mechanic, made the reverser for Royer, and delivered it to him, and he, Royer, attached it to his fulling machine. Also, that the combination was *new with Royer*, and *was useful*, and his use thereof was secret until he applied for the patent.

The Court, in the next two findings, states two facts which, in our judgment, are the crucial test facts of the case. The first is, that it *was not*

obvious and was not known whether the new combination could be used successfully *for the practical treatment of rawhide, which was the work for which the combined machine was intended, until after it had been tested and tried by the said Herman Royer.*

The other fact is, that it was obvious to any skilled mechanic that an automatic reverser could be applied to the drum of the fulling machine so as to make it reverse its motion at any desired fixed intervals.

The patent states that the *object of the invention* is to provide *an improvement in a raw hide fulling machine.* The question was, would this combination be an improvement in such a fulling machine? The Court finds that it was not obvious that it would be; and it finds that it *was not known whether it would be an improvement or not until Royer made it and tested it and tried it.* That when Royer had done all these things *he had produced a combination that was new; that was useful,* and one which *until then it was not known whether it would be useful or not.*

These findings of facts are in the decree of the Court. Transcript folios 30, 31 and 32.

Under these facts we contend that under the rules of construction given to the patent laws by the Courts, Royer had invented a patentable combination, and that his patent is valid.

Appellees, however, as we understand them, claim that there was no patentable invention covered by the patent, averring that it is *not a combination* in law, but merely an application of an old device to a new use that was analogous to the same use to which it had been formerly applied, and that in making the new application of it, there was no patentable invention. The appellant, on the other hand, asserts that he has made a *new combination* of the fulling machine and automatic reverser, and that by this new combination he has created a *new and improved machine, as an entire machine, differing in its mode of operation as an entirety, from any other entire machine ever made.*

Two rules of patent law are therefore invoked, each one of which is well established by authority. The appellant invokes one rule, and the appellees the other. The law is well established, that whenever two or more mechanical devices are joined together *so that they create a new action, due to their joint operation,* that such combination is new and patentable, notwithstanding that each of the devices was old and well-known and had been applied thousands of times in other machines and in other combinations, and notwithstanding that in every place to which they were applied, they each respectively performed the same individual action when combined with older machine-

ry, that they performed when incorporated into the new combination. In every new patentable combination, every separate device applied or incorporated therein, is literally in respect to itself alone, only applying an old device to a new use that is analogous, and so far as its own motions are concerned, exactly like the same uses and none other, to which it has been thousands of times applied before. Notwithstanding this fact, however, if, when these two or more devices or elements, which often consist of whole machines, are put together for the first time, the action of each blends with the action of each of the others, so as to produce a new effect never produced in any other machine, then there is a patenable combination created.

The other rule is, if a machine as a whole, or a device by itself is simply applied to a new use, or to a new purpose, which is strictly analogous to the old use to which it had formerly been applied, then the mere application of the old device or machine to such new use is not invention.

There are many cases in which it is very difficult to distinguish the dividing line between a new and patentable combination and the application of an old device or machine to a new use.

Another rule of patent law which must be kept in mind in rendering a proper construction upon

claims for a combination, is the difference between a patentable combination and a mere aggregation of devices working together in a machine but not creating any new kind of action which is the result of their working together.

An *aggregation* is shown in the case of *Reckendorfer* vs. *Faber*, 92 U. S., 347. In that case the article was a piece of rubber united to one end of a lead pencil. When the rubber was used the pencil part was not used, but when the pencil was used the rubber was not used. The pencil was used for marking, while the rubber was used for erasing. Although both were combined in one implement, still it was not a patentable combination because there was no joint action between the two.

Another case decided by this Court is that of *Hailes* vs. *Van Wormer*, 20 Wallace, 353. In that case it was not so plain that the elements joined together only made an aggregation instead of a combination. The patent was upon stoves. The patentee had picked out from stoves already in existence, the best parts of each and embodied them in a new stove of a well known class, known as "Base Burning Stoves." The Court held that as each one of the parts did in the new stove just what they did in the old stoves, and nothing more. That the new stove, although it was better

than the others, did not contain a patentable combination because there was only an aggregation of the several results of the several elements, that there was no new result or joint action between the different parts, and therefore it was a mere aggregation of devices and not a patentable combination.

The Court held that "combined results" are not necessarily a novel result, nor are they an old result obtained in a new and improved manner. Merely bringing old devices into *juxtaposition* and then allowing *each to work out its own effect* without the production of something novel is not invention.

At the same time the Court holds in the same case that:

"It must be conceded that a new combination, "if it produces new and useful results, is patent- "able, though all the constituents of the combi- "nation were well known and in common use "before the combination was made. But the *re- "sults must be a product of the combination* and not "a mere aggregate of several results, *each the com- "plete product of one* of the combined elements."

The Court will here notice the difference between a *combination of the results* of several elements which amount to a mere adding together of those results, just as pouring a dozen separate

buckets of water into one barrel is a mere adding together of that many buckets of water and nothing else, and the combining together of two *different devices* or machines, by means of which the two operate together, and by operating together *produce an effect or result which could not be produced by operating the two separately.* This produces a new kind of effect which could not be produced by adding together several separate effects.

A good illustration of what a combination is, is shown in the case of *Blake* vs. *Robertson*, 94 U. S., 728. This patent was on a stone breaking machine. It had three claims, each one being for a combination of elements. Take for instance, the first claim, which reads as follows:

"A combination of a stone breaking machine "of upright converging jaws, with a revolving "shaft and mechanism imparting a definite recip- "rocating movement to one of the jaws from the "revolving shaft, the whole being and operating "as set forth."

This claim with the others was sustained by this Court, as it had been by the Circuit Court from which the appeal was taken. It is easy to see that in this claim the devices are joined together so that one operates upon the other and produces a joint mechanical action

which could not be produced by the using of the devices separately, and adding their individual separate results together. It is *not an addition of the results* of the different devices, but it *is a new result* produced by the *joint action of the devices.* It was not pretended that any of the elements of this combination were new, or that either element in the combination produced any result by itself different from what had been produced by the same element when used in other machines or in other places. As for instance the revolving shaft was a revolving shaft, and nothing more. The converging jaw was a converging jaw, and moved back and forth just as converging jaws had done in carpenter's vices and a hundred other places. In a very general and literal sense (the same sense however used by Judge Drummond in deciding our case in Chicago) it would only apply the old ordinary revolving shaft to a new use. In the same sense, so far as the jaw was concerned, it was only applying the converging jaws to a new use, and the same remark could be truthfully made of the remainder of the mechanism. But in applying these various devices to this new use a new effect had been produced which was due to the joint action of these devices.

The new use to which each device is put in a

patentable combination is a use which makes its action *blend or mix with, or control* the action of each of the other devices and thereby obtain a resultant action which could not be produced by using the same devices separately.

This *joint blended action* or want of it, *is the test* in all cases *as to whether a combination is patentable or not.*

There is another rule to be invoked in the interpretation of patents, which is that of proving the state of the art to which the invention belongs, for the purpose of ascertaining what the patentee had invented and what the patent covers. Some patents are very broad and some are very thin and narrow.

Those which are narrow are frequently drawn so as to appear upon their faces as broad as the patents which are really entitled to a broad construction. Morse, who made the first operative telegraph, took out his patent therefor. His was an original idea, which created the original operative telegraph by which language could be conveyed between distant points by an alphabet. After he had made his invention and others had seen it at work, a great many changes and improvements and devices were created by subsequent inventors, for which they would

take out patents. In the specification of their patents they would describe the telegraph and its operative devices, which would include their own changes or improvements, and cover the same by claims in which the language would be broad enough to cover the whole telegraph as original with them. In suits for infringing such second patents the defendants would prove that Morse had invented a telegraph before, and that what the second patentee had invented was only an improvement thereon. *This would be proving the state of the art.* Suppose in such case that the second patentee had sued Morse for using one of his own prior machines, and had claimed that portions of the devices being used, were the mechanical equivalents of the devices shown and described in the second patent, and therefore an infringement. Morse, in defending would prove the state of the art, and in so doing would prove that what he was doing was using the very devices included in his own prior patent and apparatus. Under this proof the Court would construe the second patentee's patent to be limited to his new form of devices as that would be the full extent of his invention. The law gives a man a patent for all that he has invented, but no more.

Suppose on the other hand, that Morse brought suit against the second patentee, claiming that what he was using was a mechanical equivalent

of the devices covered by the Morse patent, and was therefore an infringement. In this case, proof of the state of the art would show that Morse was an original inventor of the original telegraph, and not a mere improver of some other man's invention. His patent would therefore receive a broad construction, and if what he had invented and covered by his patent. was found to be in the defendant's apparatus, in the form of mechanical equivalents or substitutes, the defendant would be held to be an infringer, although an improver. Proof of the state of the art is taken for no other purpose practically, except to show exactly of how much, or of what the patentee was the original and first inventor. In law, when this is ascertained, his patent is construed accordingly, and *he is given the exact benefit of all that he was the first and original inventor of*, no more, no less. This is just exactly what the law gives to every inventor; a patent covering his invention fully, but nothing more. And where an original invention is made, and a long list of patented improvements follow, each succeeding one being of less importance and less in substance than the last, the patents should be construed and measured by the inventions, and the last ones of course become very narrow. Hence the necessity of proving the state of the art.

I have referred to these several rules, for the reason that the several cases which I am about to refer to hereafter involve all of them, and it is necessary to bear these rules in mind, in order to avoid the conclusion that the courts have stultified themselves, by rendering what, except for the application of these rules, would appear to be conflicting decisions in different cases. When, however, it is noticed how the several rules referred to are applied to each of the several cases, it will be found there is little or no conflict in the decisions, unless it may be in some isolated cases, in which decisions were made without following the rules of law. Since we know that courts frequently overrule their own decisions, it would be claiming too much to insist that no mistakes of law had been made in any of them, and that every reported case had been correctly decided.

The case of *Mitchell* vs. *Tilghman*, 19 Wallace, 287, occupying one hundred and thirty-two pages (from page 287 to page 419) was considered a leading case, but it was overruled in *Tilghman* vs. *Proctor*, 102 U. S., 707. In the latter case the opinion of the Court occupies twenty-seven pages. This is only one instance in which this Court has reversed itself. I cite it for the purpose of reminding the Court that in

using the authorities, some of them may have to be taken *cum grano salis*, and that it is not safe to adhere to any one decision when it runs counter to the general mass of authorities.

I will now refer to enough of the leading adjudicated cases to illustrate the principle upon which the courts have held that various patents have not covered patentable inventions, and also of the other class of cases in which the courts have held that inventions and combinations were patentable. The ultimate object of examining these authorities is for the purpose of finally applying the principles to the combination covered by our patent, and ascertaining by strict legal rules whether Royer, when combining an automatic reverser with the drum of his fulling machine, did make a *new combination, in which the two devices operated together, the action of one blending with* the action of the other, so as to produce a new, joint action of the two, which could not be produced by using the two separately and then adding their results, and which were never produced in any other machine; and by so doing, obtained, *on account of this new joint action*, a machine *which was new, as an entirety;* or whether he had merely taken an old device and applied that device as a whole, to a new use, which new use did not incorporate such old device into a new

and newly operative combination. A joint operation and consequent combination which created a new operative organization in the Blake patent, is very apparent. There are other cases that come close to the dividing lines. The case of *Strauss* vs. *King*, 2 Federal Reporter, 236, was on a patent which was commonly known as the rivet patent. The inventor, Davis, had inserted a rivet in garments, just at the point where the seams which connected the two pieces of cloth together, joined the lower edge of the pocket openings. These rivets are frequently seen in heavy overalls and hunting coats. Experience proved that these rivets, thus inserted in heavy goods, were in fact a very great improvement.

The claim of the patent was:

"As a new article of manufacture, pantaloons "or other garments, having their pocket openings "secured at the edges by means of rivets, or "their equivalents, substantially in the manner "described and shown."

Very few, if any patents were ever contested more vigorously or at greater labor and expense than was this rivet patent. Four hundred and twenty-eight witnesses were examined in the case. The proofs covered over three thousand six hundred printed pages, besides a large amount of ex-

hibits. The infringement was not contested, but the contest was over the validity of the patent. A vast amount of testimony was taken upon the issue of anticipation. The defendants also contended that there was no invention in the thing patented, claiming that the invention was nothing more than placing at the corners of a pocket opening the old well-known rivet, and that no new function was performed by the rivet in that place from what was performed by it in any other place.

The defendants also claimed there was no combination between the rivet and the seam and pocket openings, but that the whole constituted a mere aggregation of parts.

Complainant on the other hand claimed that by adding the rivet in that particular place there would be a new combination formed, consisting of the sewed seam, the two parts of the cloth that were joined, and the pocket opening.

The case was tried before and decided by his Honor, Judge Blatchford, a jurist whose reputation has justly made him prominent among the leaders of the world's jurists as a correct expounder of patent law, and who is now one of the Justices of this exalted tribunal.

His decision was in favor of the patent; that

there was a new combination formed which was an improvement to the garments. The complainant in that case did not contend that the rivet as applied by the patentee, by itself did any thing different or performed any function different from what it usually did and performed. But he did claim that by inserting the rivet in that particular place, *a new organization* of the seam, cloth, pocket opening and rivet was formed which made a valuable and patentable *improvement in the garment.* The prima facie evidence of invention furnished by the patent was greatly strengthened by the oral evidence in the case which proved the value of the invention *as an improvement to the garments.*

Still the only thing new added was the rivet. The other parts existed before the invention as they did afterwards.

The case of *Strauss* vs. *King* is quoted by Merwin on Patentability, pages 365, 366. And in a note at the bottom of page 366, the author says:

"The learned Judge sets out in great detail the "exact application and working of the plaintiff's "device; but after all is said and done, was it "anything more than using a rivet in a new "place? And the function of the rivet being "merely to hold fast, does it require invention "to perceive that a rivet which holds fast in one "place will do so in another?"

The difference between Judge Blatchford's opinion as expressed in his decision of the case, and the opinion of the author as expressed in the note referred to, shows the difference between the great intellect and master mind of Judge Blatchford—which has not only earned for him a reputation that places him among the foremost patent jurists of the world, but in addition has raised him to the high position of a Justice of this Court, and makes him a continuing ornament and an honor to this exalted tribunal — and the capacity of the author of the work mentioned, which could only see a new application of a rivet, and could not see that this new application of the rivet in an organization which made a very great *improvement in the garment* was an invention. Had a suit of those heavy overalls and a hunting coat been shown to the author before the rivets were applied, and he had been requested or even offered a reward to have made any improvement in those garments, he doubtless could not have done it even though he had combined in himself the professions of a tailor, a miner and a hunter, and been familiar with the use of rivets from his boyhood. Yet when the patentee, Davis, took these same garments and by the addition of a rivet did make a great improvement in them by the insertion of the rivet, the same author would cry out

that no invention had been made simply because everybody knew how to use rivets. He could not see far enough *even after the fact was shown to him* to realize that it was a discovery and invention to experiment and ascertain that the use of the rivet would be an improvement to the garments when applied as the patentee, Davis, applied it. The invention did not lie in the mere application of the rivet but *in discovering that such application was an improvement.* A thousand rivets could have been put in the garments and yet over 990 would have been an injury and a detriment instead of an advantage.

The author, however, was right when he says that nothing was done other than using a rivet in a new place, and intimating that it did not require invention to perceive that a rivet which holds fast in one place will do so in another. That the use and only use of the rivet is to hold fast, was well known, and it was as well known before Davis' invention as since, that a rivet would hold fast as certainly in one place as in another. Yet that knowledge did not prevent Davis from discovering that by putting the rivet in the new place and making it to hold fast in that new place just as it had always held fast in other places, he was greatly improving the garments.

In combinations generally that are new and patentable, the discovery is not of what each device will do by itself, because that is well known, but the discovery and invention consists of finding out that by putting the different devices together so that they co-operate and co-act, and so intermingle their respective individual actions and operations with the actions and operations of the devices with which they are combined, that a new result is obtained and a new organization created. Royer's whole machine, as an entirety, working automatically, without a constant attendant, making fulled rawhide, was a new thing and a new result.

A list of cases in which it was held that there was a want of invention covered by the respective patents involved, is found in 110 U. S. Reports, on page 494. In several of the cases the patents covered processes or a substitution of one material for another or were narrowed by the state of the art until no inventions were left.

Such cases I do not analyze as they do not serve to illustrate the merits of our case, which is purely for a new mechanical combination which creates a new mechanical organization; and we freely admit the rule that merely applying an old device or old process or old machine to a new analagous use is not patentable.

The case in which this list is found, is that of the *Penn. Railroad* vs. *Locomotive Truck Co.*, in 110 U. S., commencing on page 490.

In the last case mentioned, the patent was for connecting with the locomotive its forward truck, in the same manner that the same kind of truck had been commonly connected with the cars running on the same railroad.

The Court says on page 493:

"The question therefore is, whether employ-
" ing. as the forward truck of a locomotive engine
" with fixed driving wheels, a truck already in
" use on railroad cars, has the novelty re-
" quisite to sustain a patent."

It is readily seen that the combination of that truck with a car, was essentially the same as the combination of that truck with the engine. Both engines and cars are wheeled carriages that run upon railroad tracks. When the combination of the car and the truck with the connecting devices between the two was made, it was a perfect combination. All that the inventor in fact did was to withdraw from that entire combination the forward end of the car and substitute instead of the forward end of the car, the forward end of the locomotive. The entire elements in both cases consisted of the truck, the forward end of a rail-

way carriage, and the same identical connecting devices between the two. The general combination was the same, and the general effect and operation of the combination as a whole, was the same in both cases. No new effect whatever was produced, either as to the operation of any one of the several devices, or as to the entire combination of all the devices, and this Court held, that there was nothing patentable in merely substituting an engine for the car, so long as no new effect was produced.

In *Phillips* vs. *Page*, 24 Howard, 164, the patent referred to Circular Saw Mills, and consisted of combining with the saw, guide rollers near the front edge of the saw, which run upon a shaft that was allowed to play endwise, so as to give the saw free lateral play at its center. The patentee admitted that the use of rollers for guiding the edge of the saw was old, and not his invention; but claimed the use of the guiding rollers in combination with the saw having free lateral play at its center. The evidence in the case proved that circular saws with guide pins, and a shaft with end play, was old in similar smaller machines used for sawing shingles and other things.

This Court decided that *his claim* was for the precise combination of the old ma-

chines, and therefore could not be patentable, notwithstanding that in increasing the size of the old machine, so as to adapt them to saw mills, he had made inventions and improvements which he might have patented, but unfortunately did not cover by his claims.

Near the bottom of page 167 in that case the Court repeats the rule that simply applying an *old organization* to a new use is not a patentable subject. There is a wide difference between applying an *old organization* to a new use, or combining together old devices for the purpose of creating a *new organization.*

In *Roberts* vs. *Ryer*, 91 U. S., page 157, the rule is repeated that, "It is no new invention to use an old machine for a new purpose." This, as in other similar declarations, refers to the *machine as a whole*, applied to some new use, without any substantial change or alteration, and *without embodying it as an element in any new organization or combination.*

There are other cases which illustrate the rules which I have referred to. In the case of *Slawson* vs. *Grand Street Railroad Co.*, 107 U. S., page 649, the patent sued upon covered merely the substitution of glass for the ordinary material for forming a part of one side of the fare box used upon

street railways. The only object of the glass was so that the passenger could look through it and see the fare that he had deposited from one side, while the driver could look in from his side, which was already made of glass, and observe the same fare at the same time with a passenger.

Another patent included in the same case was for merely making an aperture in the top of the fare box, so that the light would shine into it. There was no joint action whatever between the glass and the other portions of the fare box. It was simply substituting one material for another. The object of substitution was not to create any change whatever in the work performed by the fare box, or of the mechanical devices contained in it, or to make any new joint operation or effect, but merely to substitute a glass side, so that the passenger could see into the box. This clearly came within the definition of aggregation and was not patentable. The same is also true with regard to the other patent in the same case. It was merely adding an additional device by which the rays of the head light penetrated into and illuminated the box, but did not in any manner or form affect the service performed by the box or its operation. That also came within the definition of aggregation instead of combination.

The case of the *Double Pointed Tack Co.* vs. *Two*

Rivers Manufacturing Co., 109 U. S., 117, involved a patent for a staple fastening in which the points of the staples were cut diagonally so as to leave the bevel all upon one side of the point, by means of which when the staple was driven into a substance, the point would bend and turn upwards so as to form a clinch and make the staple difficult to draw out.

A second claim was for a convex metallic washer in combination with the compound bail fastening staple, having upwardly penetrating points, etc., as described. In this case the state of the art was taken into consideration by the Court; see page 120. The patent being construed in connection with the state of the art, it was held that there was no patentable invention involved, but only mechanical skill. As to the second patent, it was held to be not a patentable combination, but only an aggregation of parts. The Court held that "the presence of the washer "does not modify or affect the action of the sta- "ple, nor does the staple modify or affect the "action of the washer."

The case is valuable as illustrating the use to be made of the state of the art and also in defining the difference between a combination and aggregation and furnishing a test for distinguishing between the two.

See first half of page 121. *Phillips* vs. *Detroit*, 111 U. S. 604, is a case that strongly illustrates how a history of the state of the art, a part of which the Court took judicial knowledge of, was used for the purpose of ascertaining whether any patentable invention had been made or not.

Duff vs. *Sterling Pump Co.*, 107 U. S., 636, was a case where the invention was not anticipated; but proof of the state of the art showed that the patentee had only invented *one form* of projections on the face of a wash-board, *other forms* of similar projections *had existed before.* The patent was limited to his one form shown, because *that was the extent of his invention.*

The case of *Clough* vs. *Barker*, 106 U. S., 177, was the case of a *pioneer* patent on a pioneer combination. It was given a broad construction, and was given "*the benefit of the doctrine* of *equivalents*" because it was a "*pioneer*" combination.

I cite these authorities for the purpose of having the rules between "*combination*" and "*aggregation,*" and also the rule in reference to the state of the art borne in mind by the Court, while reading the many cases that may be cited on this argument. In these authorities these rules were applied and the decisions are often *based upon them.* The decisions would seem to be

conflicting if these rules are forgotten while reading them. I also cite them because Royer's patent covers a PIONEER *combination* in its strictest sense, and *not a mere aggregation.*

It covers a strictly new and useful *combination* in its strictest *legal* sense, and not the mere application of an old device or old machine or old process to a new use. The new combination makes a new mechanical organization. The reverser operates the machine, and the machine operates the reverser. These new effects intermingle and are created by the new combination. The new combination with the new effects creates a new automatically self-operating machine, *which as an entire machine, is entirely new.* No other machine ever existed before, that would do by itself the same work *or the same kind of work.* As a whole it was a "*pioneer*" machine.

Combinations that are Patentable.

A definition containing illustrations and showing what are patentable combinations, is furnished by this Court in the case of *Reckendorfer* vs. *Faber*, 92 U. S. On page 357 the Court there says:

"The combination, to be patentable, must pro-
" duce a different force or effect, or result in
" combined forces or processes, from that given

" by their separate parts. There must be a new
" result produced by their union; if not so, it is
" only an aggregation of separate elements. An
" instance and an illustration are found in the
" discovery, that, by the use of sulphur mixed
" with india rubber, the rubber could be vulcan-
" ized, and that without this agent the rubber
" could not be vulcanized. The combination of
" the two produced a result or an article entirely
" different from that before in use. Another il-
" lustration may be found in the frame in a saw-
" mill which advances the log regularly to meet
" the saw, and the saw which saws the log; the
" two co-operate and are simultaneous in their
" joint action of sawing through the whole log,
" or in the sewing machine, where one part ad-
" vances the cloth, and another part forms the
" stitches, the action being simultaneous in car-
" rying on a continuous sewing. A stem wind-
" ing watch-key is another instance. The office
" of the stem is to hold the watch or hang the
" chain to the watch; the office of the key is to
" wind it. When the stem is made the key, the
" joint duty of holding the chain and winding
" the watch is performed by the same instru-
" ment. A double effect is produced or a double
" duty performed by the combined result. In
" these and in numerous like cases the parts co-
" operate in producing the final effect, sometimes

" simultaneously, sometimes successively. *The* " *result comes from the combined effect of the several* " *parts,* not simply from the separate action of " each, *and is, therefore, patentable.*"

The case of *Loom Co.* vs. *Higgins*, 105 U. S., page 580, illustrates exceedingly well the issues involved in this argument. In that case all that was done mechanically by the patentee, Webster, was to take a part of the devices from one loom and put them in another. These devices and the operation of each in looms used for weaving the same class of goods were well known. After Webster had put the two together, and found an advantage in their joint action, it looked as simple and obvious to weavers as our combination now looks to fulled rawhide manufacturers in the present case. In that case it was not even applying the old device to a new use, it was only applying it for the same use in a different kind of a loom from that in which it had already been used. On page 589, the Court says:

" Turning now to the invention claimed by " Webster and described in the patent under " consideration, we find that although it produced " a great improvement in the art of weaving pile " fabrics, yet, as actually exhibited in conception " and accomplishment, *it seems simple.* The

" thing to be done was to combine the advantages " of Bigelow's rigid lathe, divested of some of its " defects, and his constant command of the wire, " with Weild's trough or wire bar for supporting " the wire."

On page 587, the Court says:

" It is worthy of remark in this connection, " that the defendants in their answer, state it as " a fact, that, prior to the alleged invention of " Webster, looms containing lays having shuttle " boxes rigidly attached were publicly known " and described in certain English patents, which " they specify; and that all the other parts and " elements mentioned in the fifth claim of Web- " ster's patent (being the claim relied on) were " described in another English patent of one " Birkbeck; and they aver and insist, as will be " more fully noticed hereafter, that the application " and use of the two things together, that is, *the* " *parts described in Birkbeck's patent with the rigid lay* " *and shuttle box described in the other patents*, were " obvious and required no invention; and that " therefore the alleged invention of Webster was " well known, and constituted a part of the " known state of the art."

On page 591, the Court further says:

" It is further argued, however, that, supposing

" the devices to be sufficiently described, they do " not show any invention; and that *the combin-* " *ation set forth in the fifth claim* is a mere aggre- " gation *of old devices already well known, and* " *therefore it is not patentable.* This argument " would be sound if the combination claimed by " Webster was an *obvious one for* ATTAINING THE " ADVANTAGES *proposed*, one which would occur " to any mechanic skilled in the art. But it is " plain from the evidence, and from the very fact " that it was not sooner adopted and used, that it " did not, for years, occur in this light to even " the most skillful persons. *It may have been under* " *their very eyes*; they may *almost be said to have* " *stumbled over it*, but *they* certainly *failed to see* " *it*, to estimate its value, *and to bring it into* " *notice.* * * * * * *

" At this point we are constrained to say that " we cannot yield our assent to the argument, that " the combination of the different parts or ele- " ments *for attaining the object in view* was so obvi- " ous as to merit no title to invention. *Now* " *that it has succeeded*, it may seem very plain to " any one that he *could have done it as well. This* " *is often the case with inventions of the greatest* " *merit. It may be laid down as a general rule*, " though perhaps not an invariable one, that *if a* " *new combination* and arrangement of known ele- " ments *produce a new and beneficial result never*

"*attained before, it is evidence of invention.* It was "certainly a new and useful result to make a "loom produce fifty yards a day, when it never "before had produced more than forty; and we "think that the combination of elements by "which this was effected, *even if those elements "were separately known before,* was invention suffi- "cient to form the basis of a patent."

To get the full force of the foregoing decision, it must be borne in mind that each one of the two devices (each one of which was, like ours, an operative piece of mechanism within itself) was not only a well-known piece of mechanism, but each one of them was well known and *had been used separately for the same identical purpose for which they were each used in the new combination.* Yet this combination was patentable, although *after it was made* it looked obvious to those who *never had*, and probably never would have *thought of it, for themselves.* It was the old story of Columbus and the egg over again.

The above "*general rule*" certainly applies to Royer's combination, and when applied to it the patent is valid.

It was a "*new combination* and arrangement of "known elements." "IT PRODUCED NEW AND USEFUL "RESULTS, VIZ., THE FIRST AUTOMATICALLY OPERATING

"FULLED RAWHIDE MACHINE EVER MADE." These new and useful results were "*never attained before.*" Under the "general rule," therefore, the patent is valid.

This case of *Loom Co.* vs. *Higgins* is a comparatively recent case. It, however, repeats the old rule announced fifty-six years before by Judge Story in the case of *Earle* vs. *Sawyer*, reported in 4 Mason 1, and in 1 Robb's Patent Cases, 490. In that case, the patentee, Earle, had taken from his shingle machine an up-and-down saw, and substituted in place of it a circular saw. Not only was the circular saw old, and the machine to which the patentee applied it old, but that machine had in it a vertical reciprocating saw, which performed the work of sawing shingles. When the vertical saw was withdrawn and the circular saw substituted in its place, the machine as an entirety, did the same kind of work that it did before. The patentee claimed the new combination. (See 1 Robb, page 494).

The defendants claimed that the combination was so simple that it was not invention. Judge Story however said in that case:

"If it is *new*, if it is *useful*. If it has *not been* "*known* or *used* before, it constitutes an invention "within the very terms of the act, and in my

" judgment within the very sense and intendment " of the legislature."

In that case Judge Story noted the language of Lord Chief Justice Abbott, who in deciding a patent case said:

" A patent for a machine, *each part of which* " *was in use before*, but in which the *combination* " of the different parts is *new*, and a new result is " produced, is good because there is a novelty in " the combination."

See 1 Robb, pages 496 and 497.

This rule in regard to *combinations* thus declared by Judge Story in 1835, has been recognized as the true rule ever since. If the combination is new, if it is useful, if it was not known or used before, then it fills every condition of the patent law, and is patentable. Such combination belongs to the man who first makes it, and the law does not allow it to be taken by others who have learned it from him, because *after they see it* they can show that it is very simple, and appears obvious to ordinary mechanics; nor because in one sense it can truthfully be said that such combination was made by taking an old device and applying it in a new place. In such case it is not applying the device to a new *use*. Its *use* is *the same as before*. As a device it *does* in the

new place *what it did in former places.* Suppose that the washing machines had been driven by belts, and that the reversing machine had been applied to them in exactly the same way in which Royer afterwards applied it to the fulling machine, whether this was so is not shown by the record, in what sense could it be said that the reverser was applied to a new use. In both cases the use of the reverser would be to shift the belt from one pulley to another, and nothing else. Appellees must recognize that there *is something new* shown in Royer's patent. This they cannot avoid because there is in fact a new organization there shown which *never existed until Royer made it.* It cannot be claimed, and I believe it is not claimed, that there is nothing new in the patent. Novelty being indisputably shown in the patent, appellees attempt to dissect it, and say that the fulling machine was old, the reverser was old, and its use in combination with a washing machine was old; and all that Royer did was to take the reverser from the washing machine and apply it to the fulling machine. They then go further and say that in so applying it to the fulling machine, Royer *did not make a new combination.* What did this reverser do *in its individual capacity* in one place that it did not do in the other? Appellees and their counsel will, doubtless, answer "nothing;" since, if

they admit that the reverser did perform a new operation in its new place, they thereby admit a patentable invention, in thus supposing that Royer applied the reverser to *the fulling machine.* The *fulling machine* was not a *new use,* but it was *a machine.* It became an element in the new combination. A *new use* is not a *thing;* and it cannot become an element in a mechanical combination. It was not a new use of the reverser, but it was an *old use* of the reverser in a *new combination. Can this statement be truthfully denied?* In thus supposing that the washing machine reversers were run with belts before Royer made the combination, I am assuming a position more favorable to the appellees than the facts will warrant. The washing machine reversers were run with gearings instead of belts, and the reverser was not applied to the fulling machine without a change which may have required invention.

I will here digress, for the sake of illustrating by authorities the point that I am here trying to demonstrate, which is, that whenever a new device is first added to an old organization in such a way that the two are incorporated together, and produce to some extent a new and useful joint action, that there is in law a new *combination* formed *which is patentable,* notwithstanding

that such added device performs no service in its new position, except such service as was exactly the same as, or strictly analagous to, the service which it had already performed in other places; and, notwithstanding that it may be literally true, that so far as that one device is concerned, it is individually applied to a new use; the term "new use," being used in the sense in which the appellees use it, but which is not a correct sense. I wish to demonstrate that such "new use" is not the "new use" of a device, or machine, or process which the law pronounces to be no invention and unpatentable.

I.

The rule is laid down by this Court in the *Penn. Railroad* vs. *Locomotive Truck Co.*, 110 U. S., page 494, in about the strongest language ever used by that Court as follows:

"That the application of an old process or "machine to a similar or analagous subject, with "no change in the manner of application, and no "result substantially distinct in its nature will "not sustain a patent, even if the new form of "result has not before been contemplated."

This language includes an old process of an old machine *as an entirety* applied to a new process or a new use. The rule especially excepts

the application *when any change in the manner of application is made*, or when *any result substantially distinct in its nature is obtained.* The rule does not apply in any case to the incorporation of an old process into a new or enlarged process, *nor the incorporation of the machine into a new combination.*

An instance in which a new use of an old thing is clearly patentable is presented in the case of *Tilghman* vs. *Morse*, 5 Fisher, 323. The patent in that case covered the use of a stream of sand, grains of quartz and similar material projected by any suitable means of propulsion against glass, stone, etc., for the purpose of engraving them, etc. The discovery that a sand blast could be used in this manner, was something entirely new and the invention was very valuable. The defendants, however, claimed that it was only an application of an old thing to a new use; and to sustain this position, they proved that railroad engineers had been in the habit of driving cattle off of the railroad track by projecting against them a stream of sand with a jet of steam. This stream of sand, driven by a jet of steam, seems to be the identical thing described in the patent. The patent, however, was for the process of cutting, boring, etc., by sand used as a projectile when the requisite rapidity had been artificially

given to it by any suitable means. The patent was of course sustained, because:

"No one from observing the temporary opera-
" tion of the process on the animal, would infer
" that he could, by the same means, produce the
" result which the plaintiff describes. Nor is
" there any resemblance in kind between those
" results and the result produced on the animal."
(See pages 332, 333). This illustrates a new use which is not analogous to the old use. Other instances of applying an old device to a new use and the patent being sustained therefor, because the new use involved the discovery of a new effect, and therefore was not analagous to the former uses made of the same things, are found in Curtis on Patents, as follows:

In section 69, a patent for the new use of soft metal for diminishing friction in machinery, held good against a defendant although that same defendant had already used the soft metal for lining in machines where moving surfaces required to be steam tight. In sections 73, 75, 76, and 133 to 138, where a hot air blast with *anthracite* coal was substituted for a hot air blast and *bituminous* coal. Also where pit coal was substituted for charcoal in the manufacture of iron. Also section 68 where plates of zinc and copper, already used for other purposes,

were applied for sheathing ships' bottoms. Also sections 6, 16, 35 and 132 where a flame of gas was substituted for other flames for singeing lace. These references are to cases which are leading English cases and have been adopted as leading cases by the American Courts. The use of anthracite coal in place of bituminous coal, and the use of gas flame instead of other flames, would have been strictly analagous to the uses of other coal and other flames except for the fact that they produced either new effects or the same effects in a better manner, so far as the *substitution* went. So far as the use of the anthracite coal was to be compared *with its own former use* it was, of of course, *the same.* It produced heat by being burned, and nothing else. The gas flame also only performed in its new application the same well known operation which it had a thousand times performed before. It produced heat and light and *consumed whatever combustibles were placed in the flame.*

In *Strony* vs. *Noble*, 3 Fisher, 586, the patent was sustained for covering whips with a knit fabric, although other things had been covered with the same kind of knit fabric, and it was claimed in that case that it was only the application of an old article to a new use. His Honor, Justice Blatchford sustained the patent and stated the kind of

uses in which the application of an old thing to a new use was not patented. He says, pages 588 and 589: "Although a tubular knit fabric was old, " and although a whip was old, and although the " idea of covering the whip and whip handle " with something was old, it by no means follows " that the application, in the manner shown in " the specification of such a knit fabric to the " covering of a whip, so as to produce a whip or " a whip handle, covered with such a fabric, sub- " stantially as described in the patent, is merely ' applying the knit fabric to a new use, *in the* " *sense in which, in the Law of Patents,* the mere " application of an old article to a new use is " held not to be the subject of a patent. Such " applications are of this character—using an um- " brella to ward off the rays of the sun, it having " been before used to keep off the rain, eating " peas with a spoon, it having been before used " to eat soup with; cutting bread with a knife, " it having been before used to cut meat with."

"To apply the principle here invoked to avoid " the first claim of this patent *would render void* " *the mass of patents that are now granted. There* " *is scarcely a patent granted that does not invoke* " *the application of an old thing to a new use, and* " *that does* NOT IN ONE SENSE FAIL TO INVOLVE ANY " THING MORE. But the merit consists in being " the *first to make the application*, and the *first to show*

"*that it can be made*, and the *first* to show that "*there is utility in making it.*"

In *Gallahue* vs. *Butterfield*, 6 Fisher, 203, beginning at the bottom of page 214, the Court says: "*All machines are* in a certain sense *combinations;* "but it is not true of machines as such, that "*because every one of its members performs in it the* "*identical office which it would perform, howsoever used,* "*the conjoint action in their new combination may not* "*produce a result new and useful and never before* "*attained.* In this view I deem this claim valid," etc.

In *Watson* vs. *Cunningham*, 4 Fisher, page 531, the Court says: "It is scarcely necessary to "support this conclusion by a re-statement of "the familiar principle that a combination, all "the elements of which are old, *is patentable, if a* "*new or improved result is thereby obtained*, or that a "combination, *all the elements of which, except a* "*single one, have been before used together, is also the* "*subject of a patent.* The *whole* combination is to "be regarded *as a unit*; and if *all its essential ele-* "*ments have not before been embodied and employed* "*together* IT IS TO BE TAKEN AS AN ORIGINAL INVEN- "TION."

In the case of *Consolidated Valve Co.* vs. *Crosby Valve Co.*, 113 U. S., page 157, the patent was for

a safety valve made in the usual manner, except that there was an addition of an annular grooved flange constructed, which increased the surface against which the steam could press. Of course, annular grooved flanges by themselves were not new. The office to be performed by the safety valve was the same as the office always performed by other safety valves. The change made by Richardson, the patentee, made the valve work better than former valves had worked, in the particular that it would close suddenly at very nearly the same pressure of steam at which it would open. A difficulty with the former safety valves was, that after once opening they would not close until the pressure of steam was reduced much more than was desired.

A later patent of Richardson which was involved in the same case was a combination patent. The combination consisted of adding to his former safety valve a screw ring, which by being turned would be carried by the screw up or down, and thereby regulate the size of the annular opening from which the steam would escape when the valve was forced open by steam pressure. In this patent none of the elements by themselves were new, nor were they claimed as new. It was merely adding the screw ring which was a well-known device. Every nut is, in fact, a screw

ring. It could just as truthfully have been said in that case that nothing was done except to apply the same screw ring to a new use; as it can truthfully be said in our case that nothing was done except to apply the automatic reverser to a new use. Still this Court sustained both the patents in a lengthy and very strong opinion.

The decision in this case was rendered as late as 1884, and a comparison of the opinion of the Court in this case with the numerous other recent cases of this Court in which they have held the patents void for want of invention, or have restricted their claims so as to not permit them to cover mechanical equivalents and substitutes, shows that it is only in those cases in which there is nothing new produced *in fact*, that the Court holds the patents invalid. Yet, even Richardson, in his improved safety valves, had not produced a machine that contained more of novelty than was contained in the self-acting rawhide fulling machine made by Royer after he had perfected, and finally succeeded in making his new combination successfully operate.

Many other authorities might be cited, but I think the foregoing are enough to illustrate and convince the Court that in *every instance* where a *new combination* is made of two machines, or two de-

vices in which *there is produced a joint action and operation due to the combination*, that *such combination is always patentable.* That in such case it is not a defense or an answer to the patent to say that the invention consists only of applying old devices or old machines to a new use. This can always be said of every valid combination patent, excepting only in those very few instances in which one or more of the elements is a new invention as well as the combination. Such combination patents, however, are very few.

There is another principle involved in this case which is made apparent from the evidence taken, and which was not before Judge Drummond in our Chicago case. However apparent or obvious it may seem to be to any mechanic, that a reverser applied to a rawhide fulling machine, would do the work of alternately reversing its motion, still it was not by any means obvious that the *fulling machine itself* would do *its work* if combined with an *arbitrary mechanical automatic* reverser. On the contrary, the evidence of Mr. Royer shows that the doubling and winding of the hides around the shaft, back and forth, had to be made in a close cage, and with an end pressure brought to bear upon the coil of hides being treated in the machine. (Record, pages 33 and 34, folios 86 to 92.) No two hides were of the same thickness, and

different parts of the same hide were also of different thickness. It was common for the hides to catch and be torn loose from the central shaft of the machine; at other times to wedge in the machine in such a way that unless it was instantly stopped the hides would heat, burn and be injured or entirely spoiled. To be worked successfully, the hides must not be too damp nor too dry, but must be worked in just that condition which would reduce them to a soft and pliable condition *by a loosening of their fibers* and not by making them wet.

For these and similar reasons fully explained in the evidence of Mr. Royer (see Record, page 32 to 39), it was not by any means obvious that the *fulled rawhide machine* could ever be made to operate automatically at the time the reverser was applied.

Appellees' witness, Peter Frederick Clerc, testifies that he made washing machines with automatic shifting devices of the same principle as the one in Royer's patent. That the one he used was driven by two gears instead of a belt. That he told Royer he was sure he could make a reverser for his fulling machine, and that he was positively sure the *reverser* would work, but distinctly states *that he does not know whether or*

not the fulling machine would work if an automatic reverser was attached to it. He says: "I knew "positively that the *reverser would do its work.* "Whether the *machine with the reverser attached* "*would do good work in treating hides or not,* I DON'T "KNOW." (Record, page 19, folio 52.)

On page 18 of the record, folio 50, he says: "It was Mr. Royer and not I who first suggested "combining an automatic reverser with that "rawhide machine. So far as I know, Mr. Roy- "er first actually made that combination — put "the two together. * * * *Mr. Royer is the* "*first man I ever knew who tested and tried the com-* "*bination of an automatic reverser with that rawhide* "*machine.* So far as I know, he was the first."

Appellees' witness Peter Lambert, testifies to seeing a similar automatic reverser upon *washing machines,* and that he would know after he had seen the reverser operate with the washing machines, *but he did not know whether the fulling machine could be made to operate and do its work with an automatic reverser or not;* that while he knew all about reversers, he knew nothing about the rawhide machine. (Record, pages 15 and 16, folios 40 to 43.)

The evidence of Royer and Clerc and Lambert, taken all together, show perfectly well that while

it was known that the *reverser* would do *its* work, it was not known whether the *rawhide fulling machine* would do *its* work with an automatic reverser, or not. This was a thing that *had to be learned* by trial and by experiment, and this was the *only thing of value* in the combination. It was the *work of the fulling machine that was to be utilized, and* that *was wanted*, not that of the reverser.

The combination was no more applying the reverser to the fulling machine than it was applying the fulling machine to the reverser. *Until the two were put together and tested, no human being could tell whether they could be made to operate together and do practical work in the treating of rawhides or not.* THIS IS THE EVIDENCE IN THIS CASE. Neither this branch of the case, nor the evidence appertaining to it, was before Judge Drummond at all.

Not only was it doubted before Royer applied the reverser, whether the two would do practical work or not, but the doubt continued for a long while after he applied it. He found that the reverser itself aggravated the troubles which before were encountered with the fulling machine, and it took a long and continued effort of trials, experiments, changes and more changes, before the machine as an entirety could be made to work successfully in the work for which it was intended.

In Merwin on the Patentability of Inventions, 93, pages 299, 300, he says:

" It is scarcely necessary to add that the ex-
" istence of an analogy between the old and the
" new use *cannot be determined by the seeming sim-*
" *ilarity of the two uses*, or by the fact that they
" are both connected with the same object or
" class of objects. This is true, for the obvious
" reason that the new use may depend for its ef-
" ficacy upon some property in the old contrivance
" or process, *or in the new object* to which it is ap-
" plied, *entirely different from any other called into*
" *play by the former use.*

" Furthermore, despite the external similarity
" of the two uses, the *knowledge and judgment of*
" *one skilled in the art where the new use is made might*
" *lead him to suppose that the new use was impossible;*
" whereas, the genius of the inventor discovers
" the hidden cause which reverses this rational
" but incorrect judgment, and discloses the prac-
" ticability of the new use."

This rule of law fits and applies to the facts of this case perfectly. Few mechanics seeing the fulling machine reversed by hand; seeing the hides stop their winding operation *at different points* and requiring *an instant stopping of the machine* at other times; seeing the hides *stop for a while and then going on* with their winding

operation again, but *requiring an extra number of revolutions of the shaft* to fully wind them up; at other times seeing the *second double coming into the hides before the first double was entirely worked out*, would suppose or believe that the machine could be worked with an automatic reverser which would compel the machine to run a certain unvarying number of times in one direction, whether the hides were wedged and heated and burnt or not, and then arbitrarily reverse at a certain point; whether the hides had become entirely wound around the shaft or not. Royer himself, who knew more of the fulling machine, and of the art of fulling rawhides which he was bringing into existence, than any other man living, hardly believed it practicable, and when he tried it, it seemed *for a considerable time to be impracticable.* There was no analogy between the work done in *a washing machine* and the work done by a *rawhide fulling machine.*

I respectfully submit, that by *every legal test* which the rules of law furnish, Royer's combination was patentable. It was *new.* It was *useful.* It was a combination in which the two machines *operated conjointly*, producing *a joint action and result* that *could not be produced by using them separately.* It required experiment and trial to know whether they could be made *to do practical work*

together or not. After being put together it required *experiment and change* in the manner of using them together *before they would operate successfully.* The improvement sought was an *improvement of the fulling machine*, not of the reverser. Royer first *conceived the idea* of the combination; he first *made* the combination; he first *tried and tested* the combination, and he first made the combination a *practical success. He even invented the use for the combination.* Had Royer not lived, there is no human probability that either the present article of fulled rawhide, or the processes or apparatus by which it is produced, would be in existence to-day. He is one of the very few inventors whose inventions apply to a subject matter entirely original with, and created by themselves.

In closing this brief it is proper to refer to the decision of His Honor, Judge Drummond, in the Chicago case. It is reported in 20 Federal Reporter, 853. There are two cases decided, both being brought by Royer against the same defendants upon two different patents. One was the patent in controversy in this case, the other was his process patent. So far as this patent is concerned, it seems to us that Judge Drummond *entirely overlooked the fact that the patent is a combination patent.* I believe I am justified in saying

that unless he *had so overlooked that* FACT he would not have made the decision which he did make, but would have considered such a decision to have been contrary to the authorities, many of which I have herein cited. The opinion says: "The first case (Court No. 17,105) is founded on "a *patent* issued to the plaintiff, dated Jan. 18, "1876, which he calls: "'An attachment for raw-"hide fulling machine.'" Royer nowhere calls his *patent* an attachment for rawhide fulling machines. *Neither is that what his patent is for.* The *claim of the patent alone decides what the patent is for and what it covers.* No matter what is said or what is described in the specification of the patent, *it is the claim alone* that covers the invention *and tells what the patent is for.* Every thing described in the patent and not claimed, is thereby admitted to be no part of the invention *which the patent covers.*

M'Millan vs. *Rees*, 5 Banning & Arden, 269.
Delaware Coal & Ice Co. vs. *Packer, ibid* 296.
Miller vs. *Brass Co.*, 104 U. S., page 352.
Keystone Bridge Co. vs. *Phœnix Iron Co.*, 95 U. S., page 278.
Merrill vs. *Yeoman's*, 94 U. S., 568,
Railroad Co. vs. *Mellon*, 104 U. S., 113.
Kidd vs. *Spence*, 4 Fisher, 37.
Johnson vs. *Root*, 1 Fisher, 351.
McResson vs. *Carnick*, 9 Fed. Rep., 44.

Brown vs. *Hinkley* 6 Fisher, page 372.
Dennis vs. *Cross*, 6 Fisher, page 141.

The claim of our patent is:

"*In combination with the drum A, of a rawhide* "*fulling machine* operating to twist the leather "alternately in one direction, and the other *a* "*shifting device* for the purpose of making "the operation automatic and continuous sub-"stantially described."

Had Judge Drummond fixed his attention upon the *claim* alone he must, we think, have said that the patent was for *this combination*, instead of looking at it as an "attachment for rawhide fulling machines,"and then we think if the evidence had in that case, as it has in this, showed the facts to be, *that this combination was new*, that it *was useful*, that it had *never before been made*, he would hardly have decided that such a combination was not patentable, *simply because one of the elements had before that time been used in other combinations.*

The difference between an "attachment" and a "combination" are very important. In the cases reported of unpatentable *aggregations*, the devices were "attached." The rubber tip was "an attachement for" pencils. While in combinations the devices are "attached" to each other; all "attached" devices are not "com-

bined" devices within the sense of the patent law.

After all that we have said in this brief in regard to this combination, we think there is no danger that this Court will overlook *the claim of the patent*, and decide that the patent is for *one of the elements* attached instead of being for what the claim calls for, viz: A COMBINATION.

An appeal was taken to this Court from the decision of Judge Drummond, but on account of a misunderstanding between counsel employed, the record was not sent up. While Mr. Royer and his counsel in San Francisco believed the record had been sent to this Court and were waiting for the case to be reached for argument, the counsel in Chicago who had the immediate charge of the matter was waiting for a specific order to proceed. Matters remained in this condition until over two years expired and the appeal was lost.

Nor can we conceive the possibility of the Court deciding that a combination which is new; which is useful, and which accomplishes a work that was never before performed by any machine or any other combination, or any other machine, and which it was not known that any combination or machine could be made to accomplish is not a patenable combination.

Respectfully submitted,

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SUPREME COURT OF THE UNITED STATES.

HERMAN ROYER, APPELLANT,

vs.

SOLOMON ROTH AND L. P. DEGEN.

BRIEF OF APPELLEE ROTH.

MANUEL EYRE,

COUNSEL FOR APPELLEE.

BACON & COMPANY, PRINTERS, 508 CLAY ST.

IN THE SUPREME COURT OF THE UNITED STATES.

HERMAN ROYER, APPELLANT,

vs.

SOLOMON ROTH AND L. P. DEGEN.

Brief of Appellee Roth.

This is a suit for infringement of U. S. Letters Patent No. 172,346 for "improvement in machines for treating rawhide." According to the specification, "it consists in an automatic device by which I am enabled to run the machine in one direction for a sufficient length of time and then reverse it, this process continuing automatically until the leather is finished."

Transcript, p. 31, fol. 82.

The patent is dated January 18, 1876. The application was filed Nov. 15, 1875. Trans., p. 31, fol. 81.

The question on p. 25, fol. 67—"It did the same thing when you got your patent, did it not?" refers to a patent for a fulling machine issued in 1868, and to which this Automatic Reverser was attached.

The facts as to the making of the Automatic Reverser, patented by appellant, and for the infringement of which this suit was brought, are these:

Peter Clerc, as early as 1864, made a shifting device, which he attached to a washing machine, and continued to make such Automatic Reversers, and to place them in use; and between 1866 and 1869 he made the shifting device, of which the drawing in the patent is a representation.

Transcript, p. 17.